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ATLANTA

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EDITED BY

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## ORIGINAL COMMUNICATIONS.

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### ARTICLE I.

*Outlines of the History of Variolous Inoculation and Vaccination, with remarks.* By S. H. STOUT, M. D., Professor of Surgical and Pathological Anatomy, in the Atlanta Medical College.

Now that small pox is prevalent in almost every city on this continent, and there is a reasonable probability that almost every practitioner in the country will be called on to treat cases of it, and to direct the means of prevention, it is deemed desirable to present to the profession a condensed statement of what is known in regard to variolous inoculation and vaccination, compiled from the best and most recent authorities. The recent civil war has terminated, leaving many of the members of the profession in the South destitute of libraries, and too much impoverished to refurnish their shelves. If I shall succeed in presenting to them such a condensed compilation as will be useful to them, though unable to propose anything new, all will be accomplished that is now proposed.

#### *Origin of Variola.*

This disease was introduced into Europe from Arabia, where it is said first to have shown itself about the time of the birth of Mahomed. It is not certain that it was known to the Greeks and Romans. Prior to the discovery of the ameliorating influence of inoculation, no disease was more dreaded or more destructive of life.

*Inoculation.*

The inoculation of variolous matter, taken from a mild case of distinct small pox, as a means of ameliorating the disease, was first introduced into England by Lady Mary Wortly Montague, in 1721, from Constantinople, where she had been previously sojourning, and had witnessed its favorable result in her own child. In 1726 the royal family submitted to it, and from that time the practice was adopted throughout the civilized world, until it was superceded by the announcement of Jenner's experiments with cow pox virus.

Long prior to the above period, it is stated that the practice was in use in the South of Wales, in the Highlands of Scotland, and among the negroes of the Guinea Coast.

Our predecessors of two generations ago had better opportunities of observing and treating small pox than the practitioners of the present day; for it was often their duty to conduct whole families, or even communities, through the stages of the disease. Hospitals were set apart for the purpose. Skill in this department of practice was necessary to secure a high professional standing. The successful inoculation was necessary to avoid the patient's taking the disease in the *natural way*; for a case of small pox was in general much milder when acquired by inoculation than when produced in the natural way. The improved practice of avoiding heating remedies, and of securing free and full ventilation was universally adopted by intelligent practitioners.

After appropriate preparation, the virus was inserted under the cuticle in the same manner now in vogue, when we inoculate the vaccine virus. The lymph was prepared, and if the scab was used, it was preferred fresh. Variolous virus, as well as vaccine virus, does not retain its virtues so well in warm or moist as in dry and cool weather; for the process of putrefaction, which is destructive of its vitality, is set up more rapidly in the former than in the latter case.

This truth it is well to bear in mind when undertaking to disinfect buildings or clothing infected with small pox virus; and it accounts, in part, for the greater facility with which

the disease is propagated in cool than in hot moist weather.

In choosing a subject for inoculation, if circumstances permitted an election, reference was had to the state of his health; none but the healthy were voluntarily subjected to it. Great care was paid to diet and regimen, with reference to overcoming a predisposition to inflammation. The plethoric and gross were reduced, by gentle purgatives, and even sometimes by the administration of mercurials or antimonials. Very old persons, and children under four months of age, were, if not exposed to the contagion, avoided. The cool season of the year was preferred. Very cold weather, which might necessitate the building of large fires, or the closing of windows and doors, was avoided. So, too, very warm weather was considered unfavorable to the safety of the operation.

The virus was preferably taken from young, healthy subjects, who were laboring under a very mild case of distinct small pox.

It has been my fortune to have seen and examined the scars upon the arms of many persons, who, in childhood, had undergone the operation; but few had more than one pock while suffering from the disease, and consequently only one scar, which in its characteristics resembled that following vaccinia.

#### *Vaccination.*

To Edward Jenner, born at the vicarage of Berkely, in Gloucestershire, in England, is due the distinguished honor of having practically first demonstrated the power of cow pox as a protective against small pox. An impression had long prevailed among the dairymen and women in Gloucestershire, that there was a certain disease, which occasionally occurred among the cows, characterized by a vesicular eruption, generally upon the udder, that if acquired by man, was a preventive of small pox. When, in 1770, he went to London as a student of medicine, Jenner frequently mentioned this popular rumor to his preceptor, John Hunter. In 1775 he gave more attention to it. Probably in 1780 he

first thought of propagating the genuine cow pox by inoculating from the cow, and thence from one human being to another.

As late, however, as 1789, being unsatisfied, he inoculated his son with small pox. Having found cow pox matter in an active state on the 14th of May, 1796, James Phipps, aged eight years, was vaccinated with virus, taken from the hands of Sarah Nelmes. On the 1st of July following, the test was made by inoculating variolous matter.

In June, 1798, he published his work entitled, "An Enquiry into the causes and effects of Variolæ Vaccinæ, a disease discovered in some of the western counties of England, particularly Gloucestershire, and known by the name of cow pox."

In this work he expresses the belief that it does not originate in the cow, but is communicated to that animal from horses laboring under a disease of the heel, known as *grease*. He *suggests*, (does not prove,) that cow pox may be small pox modified by passing through the system of the cow or horse. He asserts that cow pox, once passed through the human system, leaves it secure against the infection of small pox. After experiencing much opposition, but all the while calmly pursuing his investigations, so great was the confidence of Jenner in his discovery, that in the year 1800 he expressed the opinion that "the cow pox is capable of extirpating small pox from the earth." In 1801 more than six thousand persons had been vaccinated, and tested by inoculation of and exposure to small pox. By Dr. Waterhouse vaccination was introduced into America in 1799. In 1800 it was introduced into France. It was early supported in Vienna by Dr. DeCarro, and in Milan by Dr. Sacco. In June, 1802, active vaccine lymph reached Bombay from the Persian gulf. Parliament voted Jenner £10,000 in 1802. In 1807 an additional sum of £20,000 was awarded him. Jenner died in 1823, at Berkely, in Gloucestershire. He published but little of importance subsequent to the year 1803.

(To the Cyclopaedia of Practical Medicine we are indebted for the above facts; and for much of what it is proposed to insert in this paper.)

*Of Cow Pox in the Cow.*

This disease does not frequently occur. The writer hereof recollects the case of a negro woman who contracted, in Tennessee, a disease from the cow, which was pronounced by the family physician cow pox. The negress would never take vaccinia, though the experiment was repeatedly made upon her; and though two or three times exposed to small pox, she did not contract the disease.

Cow pox is said rarely to show itself except among cattle that are herded; it then becomes epizootic. In the year 1828 the National Vaccine Board in England, after extensive enquiry, could not find it anywhere prevalent. In 1832 the disease was observed in India. In 1830 some Italian physicians found it among the cattle of the Piedmontese Alps.

It was first believed by Jenner to be a local disorder, confined to the udder of the cow. More recent observations prove it to be a general febrile disease.

"According to Jenner, the true cow pox shows itself on the nipples of the cow, in the form of irregular pustules. At their first appearance they are commonly of a palish blue color, or rather of a color approaching to livid, and surrounded by an erysipelatous inflammation. They frequently degenerate into phagedenic ulcers. The animal appears indisposed, and the secretion of milk is much lessened. The cow is subject to other pustulous sores on the nipples, which are of the nature of common inflammation, and possess no specific quality. These are free from all bluish or livid tint. No erysipelatous redness attends them. They desiccate quickly, and create no apparent disorder in the animal. Such a complaint is frequent among cows in the spring season, and when the calf is suckling. This disease is called by Dr. Jenner the spurious cow pox."

Mr. McPherson describes the disease as observed at Moorshedabad, in August 1832, as follows:

"The animals, for a day or two, appeared dull and stupid. They were seized with a distressing cough, accumulation of phlegm in the mouth and fauces, and loss of appetite. On



the fifth or sixth day pustules made their appearance all over the body, especially on the abdomen, accompanied with fever and much general distress. These went on to ulceration, the hair falling off whenever a pustule ran its course. The mouth and fauces appeared to be the principal seat of the disease, being in bad cases one mass of ulceration, which impeded mastication, and proved fatal, apparently from inanition. The mortality in this severe epizootic was calculated at from 15 to 20 per cent."

I have made the above quotations that the reader may see for himself how very different is the cow pox described by McPherson from the very mild disease described under the same name by Jenner, and from which he derived the mild and comparatively innocuous virus so valuable to the human family. The identity of the two diseases is not admissible, except on the supposition, that climate or other attendant circumstances had in the one case, added virulence to the epizootic cause. It would certainly require much experimental proof to give assurance that the virus procured from the cases described by McPherson could be safely used on the human being, or after its use would be protective against small pox.

#### *Casual Cow Pox in Man.*

When caught from the cow by the milkers, it is thus described: "The inflamed spots on the hands and wrists run into suppuration. The pustules assume a circular form, having edges elevated above their centre, and are of a color inclining to blue. After a time absorption takes place, and swelling appears in the axilla. Fever succeeds, accompanied with headace, vomiting, and sometimes delirium. The constitutional symptoms decline in three or four days; but the sores on the hands often remain very painful and difficult to heal. No eruption of the skin follows the decline of the feverish symptoms." (Jenner's Inquiry.)

Contrast now with the above the usual phenomena of

#### *Vaccinia Inoculated in Man.*

Third or fourth day: slight elevation in wound—slight

redness. Fifth day: small vesicle umbilicated at top, containing transparent liquid. Sixth day: enlarged, small circle of redness at the base. Seventh day: vesicle well formed, round or oval—shining silvery appearance—*areola* enlarged. Eighth day: presents the appearance of a pearl set upon a rose colored circle. *Areola* increases in extent and redness to tenth day—vesicle becomes turgid at edges—disease now at its height; diameter of pock about one-third of an inch. *Areola* two or more inches in diameter—under microscope exhibiting minute vesicles upon its surface. Pock umbilicated at top; sometimes fever at or before this stage. Eleventh day: disease begins to decline. Twelfth day: scab extending over top—*areola* become faint—the lymph opaline, turbid and less viscid. Thirteenth day: matter purulent instead of distinct cells, the septa being broken up or absorbed, the vesicle is a single cavity. Fourteenth day: *areola* nearly disappeared—pock dried into a yellowish scab. After this period it gradually hardens, and during the third or fourth week separates from the skin, leaving a scar. From the eighth to the tenth day the glands in the axilla often become swollen and painful.

The above description will answer for ninety-nine in a hundred of all the cases of *vaccinia* in healthy subjects, and indicates that the lymph propagated by Jenner, and which is now in use in this country, is productive of a very mild disease.

*Is the virus of Vaccinia identical with that of Variola?*

Jenner contended, though he did not prove it, that small pox is a malignant form of a disease, which manifests itself in milder forms, as swine pox, chicken pox, and cow pox. This theory has found both supporters and opponents among scientific men.

"The identity of small pox and swine pox is universally admitted."—*Cyclopaedia of Prac. Medicine*.

Reyer asserts that variola, *vaccinia*, and varicella, are modifications of one and the same disease. Does not prove it, however.

It is said that Dr. Sonderland, at Bremen, proved that cows could be infected by inhaling the effluvia of blankets saturated with variolous matter. It is stated that experiments were made in Egypt, which showed that from cows inoculated with variolous matter, a fine active vaccine virus was procured." There was no evidence furnished by these experiments, that the virus so obtained, and called vaccine, would not propagate variola.

The experiments of Mr. Ceely, of England, Dr. J. C. Martin, of Attleborough, Mass., and Dr. Basil Thiel, of Kasan, in Russia, have been often quoted as proving the identity of variola and vaccinia.

Notwithstanding careful investigators should have scrutinized the statements of these experimenters and theorists, and the proofs have never been sufficient to justify acting upon the theory of the identity of the small pox and cow pox poisons; yet during the late civil war, a medical director of a department in the Confederacy (not that of Tennessee) ordered a surgeon to inoculate a heifer with variolous matter, and use the product thereof in vaccinating soldiers. Upon an informal remonstrance by two other medical officers and myself, the order was not executed. While medical director of hospitals of the army of Tennessee, a post surgeon, of distinguished merit, notified me that having witnessed some experiments in Paris, which satisfied him that vaccinia is variola, modified by passing through the system of the cow, he had ordered the inoculation of a heifer with variolous matter, with the expectation of obtaining a benign vaccine virus for use upon the soldiers. I immediately forbade the use of the virus so obtained, and expressed my decided opinion, that the identity of the two diseases had not been proven; on the contrary, that small pox inoculated into the cow would still be contagious small pox, and as such be propagated from man to man.

#### *Recent Experiments.*

Recent experiments were made by Chauveau, Vieussac and Meynet upon this subject; and M. Chauveau sums up

in these terms the results and conclusions of these experiments in a report to the French Academy, in July 1865:

1. Human variola is inoculated on the cow and horse with the same certainty as vaccinia.

2. The effects produced by inoculation of the two diseases are entirely unlike. In the cow, variola produces merely an eruption of papules, so small that they would escape observation, if attention had not been called to their existence. Vaccinia, on the contrary, produces a vaccine eruption, the typical form of which is large and well characterized pustules. In the horse there is also a papular eruption, without secretion or crusts, produced by variola; but although this may be much more severe than that of the cow, it could never be confounded with the horse pox; so remarkable for abundance of the secretion, and the thickness of the crusts.

3. Vaccinia inoculated singly upon animals of the bovine and equine species, protects them generally from variola.

4. Variola inoculated upon the same animals generally prevents a subsequent development of vaccinia.

5. Cultivated methodically upon these same animals, that is to say, transmitted from cow to cow, or from horse to horse, variola does not approach in characters to the vaccine eruption."—[*Boston Med. and Surg. Journal*.

That vaccine is protective against small pox in a vast majority of instances, no man can deny. How and why it protects is not satisfactorily known. The theory of its identity with variola is pretty enough, and I have no remonstrance to make against any one entertaining it, if his judgment is satisfied; but when it is proposed to base a dangerous practice upon it, believing, as I do, that it is not thoroughly proven, I must deny it, and insist upon better proof than has heretofore been furnished.

From the quotations and statements above, the following inferences are not unfair:

1st. It is not improbable that there are several diseases which occur in the cow, which it is difficult to distinguish from each other in many cases, yet as different as small pox and varicella in the human species.

2d. Jenner himself, though he established the protective power of the lymph used by him, did not have sufficient opportunity to study the disease to the extent necessary to enable him to diagnosticate it beyond a doubt, when spontaneously occurring in the cows. Clearly he was not able to prove that cow pox always originated from the *grease* in the horse.

3d. The evidences of the identity of variola and vaccinia are so contradictory as to justify, at present, the rejection of the theory, and, consequently, the condemnation of the proposed practice to procure a new supply of lymph by inoculating the cow with variolous matter.

4th. Should the supply of Jennerian lymph become exhausted, or it should cease to prove protective, as at present informed, we know not where, with certainty, to resort for a new supply, or to find a substitute.

Practically, therefore, it is important that all civilized countries should adopt and enforce some systematic plan of preserving and propagating it in its purity.

On the continent of Europe an impression prevails to some extent, that the protective power of vaccinia is on the wane. In England this opinion is not so rife. I believe that in the United States there is now as much confidence felt in its protective power as was entertained forty years ago. May not this be due to the fact, that the American physician of intelligence has more religiously propagated the original Jennerian lymph than the European experimenter, who, confident of the certainty and accuracy of his observations, has propagated, in some instances, a cow pox not identical with that used by Jenner, and possessing less protective power?

*Can the protective power of Vaccinia be accounted for upon any other theory than that of its identity with variola?*

Why, as a rule, does small pox not occur twice in the same individual? The modern theorist may plausibly answer, that the disease produces some permanent modification in the component parts of the blood, or in their arrangement, that renders the contagious matter, or effluvia,

powerless to effect those changes or movements which constitute the disease known and recognized as variola. The zymotic or catalytic agent finds not the elements necessary to sustain the fermentation, so to speak, in chemical language. Variola having wrought these supposed changes, the vaccine virus, a zymotic or catalytic agent, finds the blood destitute of certain elements necessary to the starting of the movements and changes which characterize the disease called vaccinia; or, mayhap the elements have become so combined and arranged, as to render the catalytic agent powerless to produce the necessary movements. Reverse the order of accidents above supposed, and vaccinia becomes a preventive of variola. To illustrate by a familiar example: The California yeast plant and the fungus which exists in the mass popularly termed the mother of vinegar, are distinct species of the cryptogami—they both provoke the acetous fermentation; yet if in presence of one in a given specimen of an acidifiable mixture the acetous fermentation has been completed; the presence of the other will not provoke further fermentation. It is also true, that in the presence of one, the fermentation, every thing else being equal, is more active and violent than in the presence of the other. This illustration serves to convey the idea intended, which is to indicate, that if a theory to account for the protective power of vaccinia, we *must have*, one less dangerous than that in vogue can be conceived, though it may like it remain unproven.

#### *A Scrap of Recent History.*

During the late civil war, in many localities throughout the South, and in the army of Tennessee, what was popularly termed *spurious vaccinia* became alarmingly frequent. My attention was first called to it as early as the middle of the year 1862; and occasional cases were reported as late as the latter part of the year 1864, though diminished in frequency. Before the appearance of these unfortunate cases, the battle of Fort Donaldson had been fought; the campaign in North Mississippi, which resulted in the battle of

Shiloh; and the final retreat of Beauregard to Tupelo, was ended; and the army, after suffering from many hardships, and the depressing effects of bad water in a miasmatic region, had moved round to Chattanooga, under Bragg, preparatory to the Kentucky campaign, erysipelas, chronic diarrhoea and chronic dysentery were prevalent. Many of the troops had not recovered from the sequelæ of measles, which had afflicted them so severely during the previous winter and spring.

Universal, and, in many instances, indiscriminate vaccination and re-vaccination was resorted to. Soldiers were vaccinated from the arms of soldiers in many instances by themselves as well as some medical officers without any care as to the normal appearance of the vesicle or dried scab used. In many cases the operation was followed by extensive erysipelas of the arm. Sometimes by phagdenic ulceration of the arm. A few lives were sacrificed, and in one instance reported to me, amputation had to be resorted to, to save the patient's life. My attention having been strangely drawn to this subject, I set about remedying it in the hospital department under my control. I forbade the use of virus obtained from the arms of soldiers or of any other persons suspected to be in bad health. Pure virus was distributed to physicians in private practice, with the request that they furnish scabs from healthy children to be used in the army. A medical officer was detailed at every hospital just to scour the neighboring country in search of healthy children on whom to propagate the virus, that a sufficient crop might be secured to avoid the necessity of using upon soldiers and citizens that obtained from adults. By this arrangement the army and the rear were supplied. The cases of *spurious vaccination* became less frequent and almost unknown in the latter months of the war.

The army and the people were at the opening of the spring of 1864, in better health than during the previous two years. No epidemics were rife, and in the hospitals during the campaign in defence of Atlanta, erysipelas and hospital gangrene were not as rife as during the previous year.

The gradual disappearance of *spurious vaccination*, so-called, is not therefore wholly attributable to the purity of the virus. During the prevalence of a tendency to erysipelas and gangreen, it is not improbable that bad effects follow the inoculation of perfectly normal virus. Indeed a few cases were reported by reliable medical men. Many surgeons, noted for their intelligent care in the performance of every duty, report that they never had any of the bad results to follow the operation performed by them. I am well satisfied that many of the unfortunate cases, were strictly speaking, dissecting wounds, common pus in a state of putrefaction, being inserted instead of or along with the virus. And I was impressed with the idea, that the disagreeable results oftner took place in those re-vaccinated than in those who had never been subjects of vaccination. In accordance with this the advice was given not to re-vaccinate (except in cases of known exposure to small pox) those individuals who had the characteristic scar. The theoretical ground was assumed, that vaccine virus, in a patient not susceptible to the disease, might operate as common putrifying pus. A scab formed from a vesicle which has been disturbed either by accident or design probably contains much common pus, and therefore should not be used. It was therefore recommended that only those scabs should be used that had matured undisturbed. The usual dark mahogany colored scab, unbilicated when thoroughly dry, was recognized as genuine, when taken from a healthy child who had not been exposed to an atmosphere contaminated by presence of large armies or crowded population.

The charge that spurious vaccine virus was intentionally used upon Federal soldiers is utterly without foundation. For there were more instances of unfortunate results among the Confederates.

It was not satisfactorily proven that syphilis (secondary) was transmitted by the virus. Syphilitic subjects did, in some instances, seem to have their symptoms aggravated by the artificial disease.



It was suggested by some of our most intelligent surgeons that the evil results so prevalent were due to a peculiar epidemic cause, which intensified the disease, and being gradually exhausted or expended, the phenomena of vaccinia resumed their former mild form. If the epidemic cow-pox described by McPherson, and quoted above, is admitted to be the same disease in an aggravated form as that described by Jenner, there is much plausibility in this theory.

It was contended by some surgeons that evil results never followed the inoculation of the lymph taken from the vesicle on the seventh or eighth day. Others contended that they never had evil results follow the use of the dried scab, well chosen and divested of all common pus and dead epithelial scales.

So afflicting and alarming was this *spurious vaccinia*, that an impression became rife among the soldiery that contaminated matter had been stealthily introduced among us by the Federals.

To the uncharitableness always engendered by the existence of war, is attributable the injurious impressions that were seemingly cherished on both sides of the lines, which, if founded on fact, would be disgraceful to human nature.

The pure virus, propagated as above detailed, and followed by such seemingly happy results, was obtained from the Surgeon General at Richmond, and Surgeon J. C. Mullins, who had charge of the Grant Hospital (small-pox) at Atlanta, and for a long time was Superintendent of vaccination in the department under my direction, whose observations, both in the treatment of small-pox and the propagation of pure vaccinia, were very extensive. It is to be hoped that he will at some future day place upon record the results of his experience in this regard.

#### *Conclusion.*

In view of the contradictory statements above quoted, the uncertainty of the principles involved, and the intensity of interest which attaches to the subject in consequence of our

late experience, and the probable prospect that the improvident, thoughtless race lately freed among us, are liable to spread the disease far and wide among the white race, and themselves to be decimated; if not like the American Indian, almost extinguished as a race. The subject of this paper becomes one of prime importance to us as scientific men and citizens. Enough has been said to prove that science has not sifted the subject to the bottom, and that the public safety requires that the public authorities should systematise vaccination, and enforce it not only for the purpose of driving out from among us loathsome and dangerous variola, but to preserve for all time pure and uncontaminated the genuine lymph, upon which as at present informed, we can alone rely with certainty to drive out from among us or ameliorate the dreadful scourge.

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## ARTICLE II.

*What becomes of the Decidua in Abortion?* By EBEN HILLYER, M. D.,  
Prof. of Physiology in the Atlanta Medical College.

There has always been much uncertainty and mystery as to the formation of the deciduous membrane in foetal development; some gentlemen have even gone so far as to doubt its existence at all. They should admit the fact of its existence, even though they deny the theory of its formation, as it is one of the membranes enveloping the foetus when it is delivered from the mother by the process of parturition. It is found, naturally, to consist of two layers, both together forming a tough vascular membrane—they are closely adherent, and are quite difficult of separation. The chorion and amnion are not supplied with red vascular vessels, while the decidua is well supplied with red blood. The inner membrane is called the *decidua reflexa*, the outer membrane the *decidua vera*.

It was formerly supposed by Hunter and others, that this membrane was formed by an exudation of plastic lymph, thrown out upon the inner surface of the womb, which becomes organized similar to the pseudo membranous exudation of croup—that the openings of the Fallopian tubes were closed by the formation, and that as the ovum came down out of the tube into the womb, and pushed forward the membranous expansion before it, that portion immediately covering the ovum becoming the decidua reflexa, and that lining the inside of the womb being the decidua vera. For a long time this was supposed to be the correct solution of the development of the decidua. This membrane is undoubtedly formed independently of the ovum, as is proven by the fact that it exists in cases of extra uterine pregnancy.

The theory of the formation of the decidua, as now understood and taught by most of the physiologists of the present day is altogether different from the theory of Mr. Hunter just stated. The modern theory, as established by the researches of Sharpey, Weber and others, is as follows: That at the time an ovum is fecundated, the mucous membrane of the womb, which is tubular in its structure, somewhat like that of the stomach, becomes thickened, hypertrophied, and thrown into rugous folds. This increased development is quite extensive, the spaces between the ridges forming deep furrows or sulchi, on account of which the orifices of the Fallopian tubes are not closed up. When the fecundated ovum passes down out of the tube into the womb, it becomes lodged in one of these sulchi or furrows. The peculiar structure of this lining membrane of the uterus is not particularly altered, but simply increased in development; at the same time, there exuded into the uterine cavity a peculiar fluid in which the tuft or villi of the chorion hang out and imbibe from it nourishment for the embryo within, until further provision is made by attachment. These villi of the chorion, also, where they are in contact with the mucous membrane next to womb and the side of the ridges, insinuate themselves into the tubules of the membrane: this is for further nourishment. The lodgment is

generally in the fundus of the womb, or very near the mouth of the Fallopian tube. The sides of the ridge around the ovum continues to grow up and enclose it, so that shortly it is entirely covered in; it is only the two ridges, between which the ovum lies, now continue to increase in development; the other portions of the mucous surface from this time on gradually go back toward the normal condition; but not entirely so. The villi of the chorion are now inserted all around into the tubular structure of the mucous surface. As the ovum increases in growth, the villi, which are on the side next to and in contact with the womb, increase in development, and have blood vessels going with them; those on the outer side, or the side which looks into the cavity of the womb, have no blood vessels. After a short period, the villi on this side begin to be absorbed, and finally disappear; and this portion of the covering of the ovum, which is toward the cavity of the uterus, becomes the *decidua reflexa*; that portion of the thickened mucous membrane lining the rest of the uterine superficies, becomes the *decidua vera*. At this early period the decidua reflexa has the mark or cicatrix where the two ridges have joined over the ovum. After a time the villi which are attached on the womb side are developed into the placental structure, and this portion of the mucous membrane becomes the true placental substance. At a later period of pregnancy the decidua reflexa has been pushed further and further into the womb, until it comes in contact with the decidua vera, and then it presents the appearance which we see at full term. It will be observed, finally, that this membrane is the mucous membrane of the womb, which is thus altered and turned into one of the membranes covering the folds, and is thrown off at each pregnancy, hence its name.

It is the object of this article, after thus giving the description of the deciduous formation, to enquire into its use, and the purpose it subserves in the development of the embryo; also, *what becomes of it* in cases of abortion in the early months of pregnancy. Its function is undoubtedly to furnish a means of immediate support and nutrition for the

ovum when it enters the womb, or as soon as it has been fertilized. We have already seen how the tufts of the chorion are inserted into the mucous tubules, and it is from this source that the support is derived, until the placenta is formed. It is a considerable period until this formation, and attachment (placental) is established; but by the peculiar condition which the lining surface of the womb is thrown into, there is a soft and well prepared structure, favorable to giving up fluids by absorption, for the ovum to lodge in. After the placental arrangement is completed, it is no longer of any use, and is then developed into the double membrane which we find at maturity of the embryo.

Should abortion occur at the end of the first month, it is an interesting enquiry what becomes of the decidua; is the mucous surface of the womb now exfoliated and thrown off? This would be rather a hard thing to conceive possible, and we are led to think that it is not. At this time the ovum would escape from the sulci and be expelled, only enveloped in the chorion and amnion, and floating in the amniotic fluid. I have seen cases of abortion at this period, and the decidua did not appear. At such time, the mucous membrane returns to its normal condition, and does not become deciduous. Abortion occurring at a later period, say at the second month, we might have the whole mass coming away, and we might not. I have had it both ways. At this period, when the ovum comes only covered by the chorion and amnion, it is very perplexing to tell what becomes of the deciduous mass. Were it to all come together, we would find the ovum lodged in the top, or upon one side of the deciduous body. I have had the ovum to come first, and sometime afterwards the decidua. Sometimes it was not known when the ovum came away, and the decidua alone was all the remains of the foetal existence which could be found. In this case, it presents very much the appearance of a mole, or a blasted ovum, and I mistook the first I ever saw for a formation of this kind. I think even at the end of the sixth week, or at the end of two months, when the decidua comes away, it is the exception, and does not

often happen. I am led to this belief for the reason that I have met with a number of cases in which the ovum alone was all that I could get away, although I several times made continued but prudent efforts to do so. In these cases I expected the deciduous mass to come away by disintegration, with the secretions which follow the delivery, with much fetor and offensive discharge, as is always seen when any of the secundines are left; but, to my surprise, no such disagreeable or offensive discharge occurred, nor was it unnaturally continued. In two cases I could plainly feel the deciduous mass inside of the cervix, and it felt as if there could be no difficulty in detaching it and bringing it away; but it provoked such hemorrhage that it was plainly prudent to desist, and let it come away in its own time. But, as I said, in several cases it did not come away either whole or in part by the process of disintegration. What becomes of it? It seems unreasonable to suppose that it could be absorbed; but nevertheless, I believe that, as this is the true mucous lining surface of the womb in a state of hypertrophy, that its excess of structure is absorbed, and it, at this early period, returns to its normal condition, as it undoubtedly does in abortion at the first month.

On the other hand, whenever it has come away in the cases referred to, there has been a great deal of hemorrhage, which was the result of the unnatural tearing away of the mass from its attachment to the surface of the womb. In those cases where the detachment and exfoliation at these early periods is evidenced by alarming hemorrhage, it is decidedly proper to use the tampon; for hemorrhage will continue until separation and expulsion is complete. No danger can result from the tampon now, as the womb cannot hold, with the ovum blood, enough to cause danger by its loss. When the tampon is removed, the cervix being dilated and relaxed, the ovum, decidua and all come together. Now, where the ovum is lodged in the fundus, or in the top of the deciduous mass, the whole generally does, and necessarily must, come together; for the decidua reflexa is now so firmly joined in front of it, that it cannot get

through. It seldom does, we would think, come down between the decidua vera and the side of the womb. We have already found that at full term the decidua's formation is thinned out to a membrane, and lost its character as a part of the structure of the womb, as it is long before this time exfoliated, and a new internal surface formed to the uterus in its stead. It is then a membranous expansion from the circumference of the placenta, and is expelled along with the other secundines. After the third or fourth week, it must always be expelled, and just at the period when it is too far gone into the membranous state to return to its normal condition. There will be (should abortion occur at this time) dangerous and alarming hemorrhage from the free exposed surface of the womb, from which the separation has just occurred.

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### ARTICLE III.

*The Effect of Variola in the Mother upon the Fetus in Utero.* By E. GRIFFIN, M. D., Surgeon of the City Small Pox Hospital, of Atlanta, Georgia.

That the child in utero, at any period of pregnancy, may be impressed by small pox, has been established beyond all doubt. It has not, however, been so clearly ascertained at what period of the disease in the mother the child receives the contagion. Cases have been witnessed, in which the evidences seemed to justify the opinion that the disease was contracted simultaneously by the mother and child; others, in which the child probably contracted the disease about the period of febrile symptoms in the mother, preceding the eruption; and again, others, in which the fœtus evidently imbibed the contagion at the first appearance of the eruption, and even at a still later period. The time of incubation being pretty uniform, there is no great difficulty in determining the period at which the disease was contracted,

when the first appearance of the eruption is witnessed, or from their character or condition the length of time which the pustules have existed, can be estimated.

In 1863, while in charge of the Fulton county small pox hospital, two cases of premature delivery in females affected with small-pox, came under my care. One of them was an inmate of the hospital, and under my immediate supervision; the other, though in a private family, was under my observation and treatment. In both, the delivery occurred about the tenth day of the eruption, when suppuration had commenced in the pustules, and at about the fourth and sixth month respectively, of utero-gestation. In each case the eruption of variola was found upon the child, exhibiting evidences of the same stage of advancement as that found upon the mother, and in one case pretty nearly the same amount of vesicles, while in the other the eruption was not so abundant as on the mother.

These facts afford conclusive evidence that the mother may contract the disease and communicate to the foetus the contagion directly, through the intimate connection which exists between them. And the fact that in more advanced stages of pregnancy we sometimes find that the child does not contract the disease until about the time the eruption appears on the mother, only proves that the disease may be contracted by the foetus in the ordinary way, after the mother has passed through the period of incubation, as well as simultaneously with the mother, from the same external influences conveyed through her to the child.

A case of delivery at the full period of utero-gestation occurred recently with a female, who had ten days previously all the symptoms preceding the eruption of small pox, which after remaining the usual time of three or four days, disappeared without the eruption, and left the woman comparatively well up to the time of her confinement in labor. The child, healthy and vigorous, remained lively for about a week, when fever and indisposition to take food, gave evidences of disease. These symptoms continued three or four days, when the eruption of small pox made its appearance



in the confluent form. The case is now progressing, with little or no prospect of recovery.

It cannot be said, in this case, that the child contracted the disease after birth, because the time from delivery to the development of the disease, being only six or seven days, was not more than half the usual period of incubation. Neither is it very reasonable to my mind that, if the symptoms alluded to in the mother were those of the development of variola, both could have received the constitutional impression at the same time; for in that event the period of incubation would have been twice the usual length. To date back, from the symptoms of variola in the child, the usual incubation period, it will be found that about the time that symptoms in the mother were manifested attributable to small pox, the period should have commenced. Now whether in the different stages of foetal development impressions made upon the mother are in a different manner received by the child, is a question, the proper consideration of which may reveal the true explanation of this physio-pathological difficulty.

Another case of delivery, eight weeks after the mother had suffered from small pox, came under my notice, in which the child exhibited the appearance of variola cicatrices similar to those found upon the mother. Nothing definite, however, can be determined from this case, inasmuch as nothing in the appearance of the child could be detected by which it could be ascertained with any degree of certainty whether or not the eruption in the mother and child occurred simultaneously.

In regard to the vaccination of the mother giving immunity to the child in utero against variola or vaccinia ever afterwards, I do not feel warranted, from my limited observation on this point, in giving an opinion. Some facts have come under my knowledge which favor the affirmative, yet not in a way to be entirely satisfactory.

It is hoped that this subject will engage the attention of physicians having charge of small pox in pregnant females.

## SELECTIONS.

*Bromides of Ammonium and of Potassium.* By J. B.  
READ, M. D.

The use of Bromine and its compounds has of late years received much attention from physicians abroad. And two of its compounds are now, by daily increasing testimony, assigned high places in the list of remedies useful in the treatment of nervous diseases, and of many derangements of the uterus and its appendages. Bromine has heretofore been known to the profession in this country as the principal ingredient of "Bibrous antidote" for Rattlesnake poison, and during the war, is said to have been used by Surgeons in the Federal Hospitals as an application to gangrenous wounds. The Bromides of Ammonium and Potassium seem so nearly allied in their action on the economy, that one may be substituted for the other in the treatment of disease, and the results obtained by the use of one are equally applicable to the other. The action of these remedies is specially directed to the nervous system, on which most of their curative manifestations are shown.

Bromides produce a local anæsthetic action on the upper portion of the Tracheal tube, and have a peculiar affinity to the uterus. They relieve pain, and have a decided hypnotic action, especially in cases of great excitement and sleeplessness, produced by long continued mental effort. In cases of this kind, Dr. Henry Behrend states that 25 grs. of the Bromide of Potassium, three times a day, will quiet the state of nervous excitement and produce sleep. These are cases in which our experience teaches us the various preparations of opium, and the drug itself increase rather than diminish the excitement. The Bromides are now freely used as sleep inducing agents in cases of Traumatic excitement and delirium, and in the maniacal condition that sometimes attends on the puerperal state. 20 grs. doses of the Bromide of Potassium administered every two hours have recently, in my hands, produced decided effects in a

case of this kind. When the patient came under my care she was suffering from a relapse of Puerperial mania of the most aggravated kind. *Jagitalis* was freely exhibited for some time with good effect, but had to be discontinued after a few days, and the case was then treated as above, and convalescence speedily set in. Up to this time, over 12 weeks, there has been no return of the trouble. The principal use, however, of these remedies up to this time, has been in the treatment of Hooping Cough and "Irritable uterus," with its chain of hemorrhages and unpleasant symptoms. To Dr. Gibbs, of Westminster Hospital, London, is due the credit of having first introduced the use of the Bromide of Ammonium as a remedy for Hooping Cough, and it has since been generally used and commented on. Dr. Ritchie (*Braithwait's Retrospect*, Jan. 1865) states that in Hooping Cough the general result has been to give relief to the spasmodic cough, the hoop, but that this result is not uniformly produced. Dr. Gibbs does not claim for it invincible success, but only that it is exceedingly valuable. During the epidemic of Hooping Cough which prevailed so extensively in this city during the past spring and summer, I have administered the remedy at all ages, and in all stages of the disease, and my experience teaches me that the observations of Dr. Halsey are correct.

1st. That the medicine is in itself harmless—that even in excessive doses it does not vomit or purge, but only induces a sleepy, drowsy state, and thus those that are not benefitted by its use are not injured by it.

2d. That it is especially useful in cases where the distressing hoop is incessant and violent. Many of these cases were relieved after a few doses of the medicine had been taken.

3d. That the Bromide was of no service where Bronchitis or Pneumonia existed, and these conditions had to be first removed by appropriate treatment before the Bromide was of any avail. In a case of Pertussis, with convulsions, that was under my care during the summer, in a teething child of ten months, each hoop brought on a renewal of the convulsion, and this to such an extent that they had been uninterrupted for two hours before I saw the case. The Bromide of Ammonium was administered in 2 gr. doses every hour. After the second dose the spasms were quieted—the hooping occurred only at long inter-

vals, and the child slept soundly—this sleep continued for six hours, and when the child awoke the hoop returned, but without a convulsion. The remedy was again given in 1 gr. doses, and its use continued for some days, gradually increasing the interval between the doses. The Pertussis was mastered, and the child recovered rapidly. It is especially in cases of this kind that it should be given when there is an urgent necessity for controlling the spasmodic cough, I should state, that, before giving the Bromide of Ammonium, I had resorted to full anaesthesia by chloroform, and that even when fully anaesthetised, the hoop would come on. The medicine is not unpleasant to the taste, and may be given in combination with syrup of squills or Glycerine.

Dr. Gibbs gives 2 or 3 grs. three times daily to infants, and 4, 8, and 10 grs. as often to older children. Dr. Halsey mentions two striking cases of relief obtained by its use. He remarks that as a rule 1 gr. may be given as a dose for every year of the patient's age.

In the February number of *Bro. Retros*, page 281, Dr. G. Gorreyuer Griffith, of Dublin, treats at large of the use of the Bromide of Ammonium in Irritable uterus. He thinks it to be almost a true "Utero ovarian Specific." In cases of irritable uterus, at the monthly period, attended by great pain and excessive catamenial flow, he administered the Bromide of Ammonium as follows: 10 to 20 grs., if needed, every 4 hours, or more if required; and if it were desirable to act more promptly, and reduce the matric discharge altogether and quickly, he uses the medicine thus, for the first dose, 20 to 50 or 60 grs., to be followed every hour or two by from 10 to 20 grs. This in cases where the hemorrhage is excessive.

Where pain is the prominent symptom, the drug may be administered in 20 gr. doses as often as may seem necessary. In cases where the disease assumes the paroxysmal type, Dr. Griffith prescribes 1 dr. to be taken at the very onset of the paroxysm. Where there is a periodic form  $\frac{1}{2}$  oz. or 1 scr. is given ten minutes before the time of attack, and continued afterwards, "pro re nata." The effect in such cases in my own experience with the drug, is rapid and satisfactory, more so than I have ever found from other remedial agents. Dr. Griffith writes: "The effect in allaying or removing pain, in checking,

or altogether causing to cease, any uterine hemorrhage, is sometimes magical." He is unable to arrive at any definite conclusion as to the "manner in which the Bromide behaves itself in these cases. Acting both as an anodyne and a hamostotic agent at different times, the results of experience are positive."

In a case of excessive uterine hemorrhage, occurring in an old lady of sixty-four years, who had been previously treated with tr. Ferri. Mur. and other mineral hæmos tatics in vain, the use of the Bromide of Potassium speedily checked the bleeding, and at this time four months have elapsed without a recurrence of the trouble. The Bromide in the severe sick and neuralgic headaches that so constantly attend all uterine derangements, and even regular monthly periods are of great benefit, given in doses of 30 grs. three times a day. Dr. A. Garrod, F. R. S., states that he has used the Bromide of Potassium in many diseases, and has noticed the results of its action as follows:

1st. It produces no irritation of the mucus membrane of the nose or fauces.

2d. Some patients experience a peculiar sensation of dryness in the throat and neighboring parts.

3d. When given in large medicinal doses sleepiness or drowsiness and dull headache were occasionally noticed.

4th. When administered in very large amounts, some loss of power was noticed in the lower extremities, which passed off when the medicine was discontinued.

5th. The therapeutic action was decidedly what may be called alterative; that is, it relieved certain forms of syphilitic eruptions.

6. No action was observed upon the skin or kidneys. Sir Charles Locock states that he has found the Bromide of Potassium of service in severe cases of Hysterical Epilepsy, and other nervous affections connected with uterine diseases.

7th. Bromide of Potassium exerts a most powerful influence on the generative organs, lowering their function in a most remarkable degree.

8th. It is a remedy possessing many valuable powers, in diseases dependent on and accompanied by excitement of the generative organs, as Nymphomania, Priapism, and in the menorrhagia, that is apt to set in at the period of the menopause.

9th. It produces an anæsthetic condition of the Larynx and

Pharynx, and hence has been usefully employed in examination of and operations on these parts.

Dr. R. McDonald directs attention to its use in certain forms of Epilepsy.

Dr. Ratcliffe says: "I can testify that this remedy was found more or less serviceable in cases the most dissimilar in character. So serviceable that the name of Sir Charles Locock ought to be remembered with gratitude by every Epileptic, and by many sufferers under other forms of convulsive diseases." Sir Charles Locock states that in fifteen cases of Hysterical Epilepsy he had only failed in one, and this one had fits not only at the time of menstruation, but in the intervals.

Dr. Brown Sequard also entertains the highest opinion of its efficiency. Mr. McDowell states that though at first much doubting the efficiency of the drug in these diseases, he has come to the conclusion that it has remarkable efficiency.

In the case of a lady who has been under my charge, and who has been subject to Epileptic attacks for the last six years, great benefit has resulted from the use of 20 gr. doses of the Bromide of Potassium three times daily. Under this treatment there has been no Epileptic seizure for four months. Besides these cases of Hysterical Epilepsy, reasoning from its known action on the generative organs, we should be led to expect good results from its use in Epileptic attacks, when they are traceable to sexual excess in males. While it is not claimed that these drugs are specifics for these affections, and that they will invariably relieve these diseases; still, the extraordinary results obtained by Sir Charles Locock, and the high opinion entertained of their power by the justly celebrated Brown Sequard and our own limited experience, lead us confidently to advise a full use and fair trial of the Bromides. Bromide of Potassium is administered in the same dose as the other Bromide.—*Savannah Journal of Medicine.*

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*Cerebro-Spinal Meningitis.* By GEO. N. DUZAN, M. D., Zionsville, Ind.

This disease appeared in this vicinity first in the Spring of 1863, and it has not failed to appear annually since its first visitation. During the first year of its visitation it was regarded:

by a few physicians as "Congestive Remittent Fever." But those who so regarded it during the first year of its appearance were forced to change their opinion by the varied and unaccountable phases which the disease presented at the time of its second appearance, which was in the Spring of 1864. The appellation of "Spotted Fever" was then given to it by a few physicians, and by others more appropriately, because more expressive of its anatomical seat and pathological character, "Cerebro-Spinal Meningitis." The disease begins usually with a decided chill of varied duration and intensity, lasting from one to twelve hours, followed by febrile reaction, the grade of which is in inverse proportion to duration of chill. In many cases (about one of six) there is no reaction. In such cases the pulse is almost imperceptible from beginning of attack. A contracted state of the skin, cold, clammy perspiration, confined state of the bowels, frequently vomiting, coma and death. The absence of premonitory symptoms in such cases is a point of peculiar interest, and by resemblance in every particular, excepting confined state of bowels, to "Congestive Fever," it is frequently taken for that disease. But with the cold stage the resemblance to Congestive Fever terminates, and it is unmistakably distinct. The first evidence of reaction is an increase in volume and force of pulse, which is followed by a return of heat to surface of body, extreme jaundice, acute pain mostly referred to head and particularly to occiput, frequently changing, however, from one point to another with incredible rapidity, increased sensibility of cutaneous surface, patient intolerant of slightest touch, rigidity of posterior cervical muscles with opisthotonos, eyes suffused, sometimes one pupil dilated, but generally both, with loss of vision; spots which appear upon both legs, arms and trunk are observed occasionally; no degree of pressure will alter their color; they are caused by extravasated blood, are not true eruptions, and they indicate malignancy of the disease; pulse but slightly accelerated, sometimes apparently undisturbed; bowels constipated; urine scanty, and contains an excess of phosphates. The disease will last from ten to forty days without any marked change in its phenomena. The phenomena which the disease presents are so numerous, and wanting uniformity, that every individual case may be properly regarded as a distinct disease. All of the phenomena, however, point un-

mistakably to the cerebro-spinal nervous apparatus as the seat of disease.

The disease is not contagious, because in selecting its victims it manifests a decided preference for young persons of an age from three to eighteen, and adults of a nervous temperament, and requires for its development a constitutional predisposition and susceptibility to the influence of an endemic poison. The nervous temperament and the several changes in organization as well as the natural mobility of the excitomotory system of childhood predisposes to nervous disorders, such as nervous pain and spasms, and are natural predispositions to Cerebro-Spinal Meningitis. Imperfect nutrition, confinement in impure air, continued exposure to cold, and retention of oxidized matter in the blood, will so change the constitution of blood that its cells will fail to carry an adequate supply of oxygen into the system, and the processes of calorification and histogeny are interrupted. A condition similar to venous hyperæmia ensues, the nervous centres are not supplied with vitalized blood, which is essential to healthy action, and they are thrown into a state of hyperæsthesia and excessive mobility which predisposes to endemic poisons. An individual having the natural and the acquired predisposition alluded to, if exposed to the depressing influence of malaria, the circulation in distant parts will be suspended, the extremities will become cold, whilst the head and internal organs will be congested. Coma and death, or (if the vital power be not too far exhausted,) inflammatory reaction will follow, and what parts are more likely to become the seat of the inflammatory action than the morbidly excited nervous centres? If the theory of its etiology and pathology above expressed be true, the treatment is clearly indicated. During the cold stage, although stimulants are indicated, they are of but little benefit to patient. Owing to retarded circulation and congested state of internal organs, they either remain in the stomach entirely inert, or are ejected by vomiting. After reaction is established, such measures should be adopted as will equalize the distribution of blood and excitability. Counter-irritants to invite blood to extremities, and thus relieve internal organs, are of great utility. Opiates, owing to vascular excitement of nervous centres, invariably aggravate the pain. After an equilibrium of the circulation is established, and vascular excitement of



the nervous centres removed, sulphate of quinia, stimulants and nutriment diet should be given.

These means of cure, varied as the nature of every individual case may require, constitute the treatment of the disease. It is, however, a fact both sad and humiliating, that notwithstanding all of our efforts almost one-half of those attacked die.—*Cincinnati Lancet & Observer*.

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*Case of Pericarditis, with large effusion, marked by cerebral symptoms—death.* Read before the Boston Society for Medical Improvement, Dec. 26th, 1865, and communicated for the Boston Medical and Surgical Journal. By HENRY I. BOWDITCH, M. D.

A young man, aged 17, living in a healthy place in one of our suburban cities, was the patient. Born of a nervous family, his mother and brother had had chorea. He himself had never been very ill; never had rheumatism; had had a good appetite, and seemed perfectly healthy till actual attack.

Oct. 31, 1865.—I saw him in consultation, the case having been considered a very obscure one.

The history was as follows: Four weeks before he went to bed apparently in perfect health. He awoke during the night, chilly, but a hot foot-bath and warm drinks, &c., soon restored him, after slight vomiting of the sage tea he had taken for relief.

Next day, not feeling very well, he took salts and senna, and vomited anew; and then appeared pain in the left side of the thorax, with great oppression in breathing. The attending physician, on auscultation, found nothing marked about the physical phenomena of the heart or lungs. No distinct palpitations, no cough, no sputa. The next day there was a sudden attack of extreme orthopnœa, and the pulse was nearly absent for a few moments. Still, no marked physical phenomena on auscultation. On the contrary, by the account of the attending physician there was nothing manifest, even on a close examination.

On the following day all the thoracic symptoms suddenly yielded, and never after were prominent. The pulse recovered its character, the orthopnœa disappeared, and the patient was,

at my visit three and a half weeks afterwards, able to lie down in any posture without apparent difficulty. A wholly new set of symptoms developed themselves, and were the only marked ones during that interval. Violent headache came on, with great flushing of the face and eyes, great restlessness, delirium, and strabismus, first of one eye and then of the other. For two or three days he was speechless. These cephalic symptoms for at least a week were quite severe, and were considered the only ones to be treated. After leeches and ice to the head, and active purges, and finally Bromide of Potassium, the more violent of them subsided, and when I saw him there was no flush of the face or strabismus; but there was, at times, a little wandering of mind at night, and nausea and great costiveness. He did not fully recover. One day his symptoms seemed to be typhoidal, in his dullness of intellect, some fever, &c., but the next he seemed brighter. His pulse was always rapid and feeble; his nights usually rather sleepless, with jactitation. The day before I saw him he had been quite drowsy. He had considerable nausea and vomiting a day or two previously, owing, however, apparently to medicine administered. The dejections had been normal, but rather infrequent and costive. Nothing remarkable noticed about renal excretion, but no special examination had been made.

I found him of rather small stature, with nothing striking in his aspect. He was lying on his back, quiet and rational, and without the least appearance of severe disease. His breathing was not at all hurried, and he spoke and moved in bed without any dyspnoea. His countenance was sufficiently bright; no strabismus. He answered promptly all questions, and with perfect intelligence, and during my whole examination he did not exhibit the slightest trace of cerebral disease. He did not look as much depressed or emaciated as I had anticipated finding him, after what had been said of his symptoms during the weeks preceding.

My impression, therefore, was that the cerebral symptoms that had occurred were not dependent on manifest organic changes, such as inflammation of, or effusion into the cavity of the cranium, but rather upon some sympathy with another part of the body.

Remembering the earlier and very transitory symptoms of

pain in the chest, orthopnea and pulseless condition, and the fact that at times Pericarditis is wholly lost sight of in the cephalic symptoms that occasionally accompany it, I looked to the region of the heart to see if an explanation could be found there.

On percussion I found dulness over the heart to three times the usual extent, viz: from the intercostal space between second and third ribs downwards, and in breadth corresponding. The impulse of the heart was scarcely, if at all, felt, and the sounds were very distant. A bellows murmur was heard high on the sternum, and down outside of the left nipple; not heard in the intervening space. The respiration was heard somewhat in both breasts, and in back throughout, without a trace of rales. The abdomen presented nothing of moment.

With these phenomena it was evident that pericardial effusion existed to a considerable amount. Deeming it probable that that was the primary and chief source of trouble, I suggested the application of ethereal tincture of iodine (3 ss. of iodine to 3 i. of ether) outside, and one-fourth of a grain of digitalis three times daily, or *pro re nata*. With this a general tonic course of diet was indicated—milk and bread, chicken broth, &c. As under the Bromide of Potassium, given at night, the nervousness had somewhat lessened, I advised its continuance.

The pulse continued to fail, and the digitalis was omitted in forty-eight hours. I did not see him subsequently, but he failed rapidly, and died in six days afterwards, with the signs of increasing effusion; no return of cephalic symptoms.

At the autopsy Dr. Ellis found the pia mater at the base of the brain infiltrated, at some points, with pus, and the serum was more abundant than usual, and turbid. The brain itself presented nothing remarkable.

The pericardium was enormously distended by at least five pints of a purulent fluid, and large fibrinous masses. When the sternum and ribs were raised the pericardium was the only object visible, the lungs being wholly obscured by it. There were some patches of recent lymph over several parts of the heart, which otherwise was healthy. The other organs presented nothing remarkable.

The occurrence of nervous symptoms to such a degree, with pericarditis, is rare. Dr. Austin Flint has seen three. Two died undiscovered until after death.

The symptoms accompanying this state are peculiar; maniacal often. The patient may be speechless, as ours was, or he may spit in every direction, as in typho-mania. He at times seems frightened, and almost as if in delirium tremens. He may have convulsions, or coma. It is usual to find no marks of inflammation about the brain. In the present case it was slight, and evidently was not extensive enough to have caused death.

The prognosis in any case is generally not so much from the inevitable mortality of the affection, as from its usual entire latency; so that extensive effusion often takes place without being recognized.

Of course active leeching and blistering, or iodine over the heart, would be indicated in the early part of the disease, with a mild but sufficient diet, and subsequently stimulants, with wine and quinine, are of immense benefit. But at times paracentesis would really be called for. It is to be regretted that it was not tried in this case, as the enormous effusion, that rapidly increased after I saw him, would seem to have indicated its propriety. There could have been no objection to the operation, and scarcely any danger in tapping such a large sac as the pericardium became at last. The operation has been done by Schuh, of Vienna, Dessault, Beau, and others in France. Strictly speaking, there is no more danger in opening the pericardium than in tapping the abdomen, or the pleural, or any other serous cavity. All the usual arguments against it, such as that we might strike the heart, might wound the internal mammary artery, that we could not draw off the fibrin, that the advantage would be only temporary, as the fluid would re-accumulate, &c., would become no arguments against the operation, provided we were perfectly sure of our diagnosis of a large amount of fluid.—*Boston Medical & Surgical Journal*.

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*The Cholera as it appeared at the Port of New York in 1865.*

By J. SWINBURNE, M. D., Port Physician.

The "Atlanta," an English mail steamer, iron-built, of 325 feet in length, and 36 feet beam, with two first and second cabins fore and aft on the deck, and three separate steerages of 98, 80 and 70 feet in length, and 8½ to 9 feet in height, sailed

from London on the 10th of October, with a full cargo, and 28 cabin and 12 steerage passengers.

London was at that time perfectly healthy.

On the 11th she arrived at Havre, remaining only one day, and receiving 24 additional cabin and 540 steerage passengers, mostly from Switzerland, the southern part of Germany and eastern France, all, with few exceptions, passing through Paris on their way to Havre, some remaining only a few hours, others for days in the metropolis, when already at that time the cholera was reported to prevail, though to a limited extent, and of a mild type. Among these were two families from Germany who remained a day at the hotel "City of New York," at Paris, and five days at the "Weissen Lamm" and "Hullgarder Hof," in Havre. While at these hotels emigrants who had arrived only a few days before them were taken ill, visited and attended by government officials, and by their orders sent to the hospitals.

The "Atlanta" sailed again on the 12th of October.

On the 13th the first death from cholera occurred in the person of a little child in the family from the "Weissen Lamm."

On the 14th, 16th, 18th, 19th and 22d, five deaths from cholera occurred in one family from the "Hullgarder Hof."

On the 22d a friend of the family, also from the "Hullgarder Hof," but in the 2d steerage, sickened, and died on the 24th.

On the 28th the first case occurred in the 3d steerage; 3 of the emigrants from London were taken ill on the 30th, all of whom, however, recovered.

When the "Atlanta" arrived the Surgeon reported 60 cases of cholera and 15 deaths during the passage; two more died after her arrival in port, and 6 out of 42 cases admitted on board the hospital ships, making a total of 102 cases and 23 deaths. Of the 42 cases treated in the hospital 22 were admitted on the 6th; six on the 7th; two on the 8th; seven on the 9th; two on the 15th; three on the 16th; one on the 19th.

From the first case the disease presented the uniform symptoms pathognostic of Asiatic cholera, and although in comparatively few cases terminating fatally, the same virus produced the milder forms of disease, which destroyed life in twenty-four, or even twelve hours.

The "Hermann," which sailed from Havre at the same time

with the "Atlanta," arrived at the lower quarantine on the 26th of November. The physician in charge reported 7 deaths—4 children and 3 adults. The former he reported to have died of diarrhoea and inanition; the 3 adults of disease of the heart, inflammation of the bowels, and premature parturition after a few days illness. Singular, however, that the first death occurred in the very family who had lost the mother at the Hullgarder Hof at Havre, and whose disease and death, after thirty-six hours' illness, the illiterate peasant, her husband, so graphically described, that no doubt whatever could exist that she died of cholera asphyxia.

The "Cella," of the same line of steamers, arrived on the 20th from Havre with 360 passengers of the same class, and from the same region of country, but no case of sickness or death was reported during the passage and on arrival.

The "Mary Ann," an American bark, from Havre on the 25th of October, arrived on the 12th of December. The captain reported 5 deaths during the passage—4 from cholera; the first died on the 28th of October, and the three others on the 3d, 4th and 5th of November, after an illness of one to two days duration. On a small vessel, with a deck scarcely six feet high, and crowded to its utmost capacity, and without any special care or prevention, the disease disappeared, and all on board enjoyed good health for thirty days previous to her arrival in port.

The "Harpwell," which sailed on the 28th of October, a few days after the "Mary Ann," lost seven infants during the passage, but no cholera cases occurred. Equally exempt were the two first class steamers "Europe" and "America," with passengers directly from Paris, where the majority had resided for some time previous.

That cholera prevailed in Paris, and to some extent in Havre, has been admitted by all, and what is still more significant, the "Atlanta," "Mary Ann," "Hermann" and "Harpwell" had each names on the passenger list which were not among the passengers, but reported to have been sent to the hospital by the local authorities at Havre. The clean bills of health were unquestionably issued by the same spirit which reported 200 cases at Paris at a time when upwards of 300 daily died of cholera.

Although the appearance of cholera was not unanticipated in

the port of New York, no facilities whatever were prepared for an efficient quarantine. The "Atlanta" was immediately, upon arrival, sent to the lower bay, the surgeon of the vessel relieved, and as soon as the hospital ship could be prepared and the weather admitted of the removal of the sick, they were all, as they occurred, transferred to the hospital ship; the baggage of the passengers was opened and aired; the soiled linen washed, and baggage, bedding, and personal effects of every kind subjected to fumigation in cool chambers prepared for that purpose. This fumigation was effected by a mixture of black oxide of manganese and common salt—equal parts well moistened—and the addition of sulphuric acid, one part to four. The generation of gas was so abundant that one of the hands of the boat could only be restored with difficulty after hours' attention, from the effects of inhaling the gas four hours after fumigation had commenced.

The quarantine of passengers has been decried as barbarous and inhuman; and certainly none would be more anxious to grant them better accommodations than the officer in charge. When we, however, consider that the disease is not in the vessel, but among her passengers, and will necessarily accompany them wherever they go, that the accommodations on board the vessel, if scanty, are at least adequate to their wants and such as they are accustomed to, the neglect of the authorities to provide proper accommodations, though not less fragrant, was at least shorn of its alleged inhumanity and barbarity; in fact, that debarcation does not eradicate the disease, any medical man will admit, and as an instance in proof I may mention the case of the "North America" in 1854. Cholera existed on board of that vessel two weeks before her arrival in port. Ten of her passengers had died during that time, and seven cases were sent to the hospital on her arrival. The day following all her passengers were landed. In three days 128 cases and 32 deaths occurred among 250 passengers, while the crew remained perfectly healthy, and no new cases could be traced to the vessel.

The passengers of the "Atlanta" received partique ten days after the occurrence of the last case, and the vessel, a few days afterwards, was thoroughly cleansed and repeatedly fumigated.

As facts are the only true basis of inference, I have limited my observations to simple recital of facts. Facts alone can guide us in a practical rational quarantine, and however much even medical men may differ as to the mode of its administration, all, I think, must agree upon the necessity of quarantine, both of sick and exposed.—*Medical and Surgical Reporter.*

*On Tumor of Testis, containing "Fœtal Remains," with a case.* By W. H. VANBUREN, M. D., Prof. of Anatomy, University of New York, &c., &c.

A male child, two years and five months old, was brought to me in the month of October, 1864, with a tumor of the scrotum, apparently involving the left testicle, about the size of a large hen's egg. The child was healthy at birth, and the swelling of the testis was not noticed until he was three months old, when a physician was consulted, who, regarding the disease as a hydrocele, passed a seton through the tumor in the form of a worsted thread. So much pain followed this operation that the seton was withdrawn in three hours, a glairy fluid escaping with some force, but in small quantity, and the tumor remaining hard, and subsequently growing harder under the very severe inflammation which followed. After the subsidence of the inflammation the tumor remained about at its original size, but somewhat harder, for nearly a year, when several abscesses formed and discharged themselves consecutively; and finally, after quite a large abscess had opened, a red, fungous mass protruded from its orifice, which gradually reached the size of an English walnut.

I found the tumor presenting fully one-half of its mass in the shape of this fungous protrusion, which was covered with unhealthy granulations discharging watery pus, hard to the touch, and occupying its lower and larger portions. Its upper portion, towards the spermatic cord, was generally smooth upon its surface, of a soft solid consistence, the skin adherent, and not very painful when grasped. It had never been painful except when the abscesses were forming, and when it was punctured. There were no enlarged glands in the groins. The child was weakly and pallid, and suffering from diarrhœa.

Dr. Valentine Mott had seen the case, suspected that the disease was malignant in its nature, and advised its removal.

I suggested to the father that he should take the child to the sea-side for a month, and pay close attention to his diet. At the end of this time his health was very much improved, but the tumor was unchanged. I was able to form no positive opinion as to its nature, but felt no doubt as to the propriety of its removal, and I therefore removed it by castration, in the usual manner.



The child made a rapid recovery after the operation, and I have heard, within a few days, that he is in excellent health and growing finely.

On examination of the tumor, after removal, the portion already described as a fungous protrusion, and which occupied the lower part of the tumor, was found partially covered at its lowermost surface by integument, and upon this integument, posteriorly, was a surface half an inch in diameter, thickly covered with hairs, some of them an inch in length, and presenting, under the microscope, the characteristic appearance of hairs from the head. Upon the surface of the protrusion was the orifice of a fistula, and on introducing a probe into the fistulous tract it came in contact with a very hard, smooth, apparently bony, surface. When laid open by the scalpel a cavity was disclosed about an inch in diameter, containing pus, and in contact with, and adherent to its walls, a fragment of bone, covered by periosteum resembling in shape a fragment of the body of a fetal lower jaw-bone. The length of this fragment of bone was five-eighths of an inch, its breadth three-eighths of an inch, and its thickness about the same. Implanted somewhat irregularly upon one of its margins were found four teeth, slightly altered from their normal shape, but distinctly recognizable as two incisors, one canine and one molar, in their normal relation, and appropriate in size to that of the fragment (of jaw-bone) in which they were implanted. On withdrawing the molar tooth from its alveolar socket, which was normal in its proportions, it was found to present the crown of a well formed molar, hollow within, and destitute of fangs. At the bottom of the alveolar socket the dental sac was distinctly visible, and protruding from its floor was the well formed surface of a second (permanent) molar tooth, which, when touched by a probe, was soft, and evidently not yet encrusted by enamel. It was with one of these teeth that the probe came in contact when introduced into the fistulous tract. Both the tooth and bone structure were examined microscopically, the former showing enamel prisms, and the latter the lacunæ and canaliculi of true bone.

Situated above the cavity, which inclosed the bone and teeth, was a second cavity containing turbid fluid, and lined by a smooth, apparently serous, membrane—the probable remains of the tunica vaginalis. In contact externally with the walls of

this cyst was the testicle, normal in size and appearance, with the exception of an abscess, the size of a large pea, situated in its substance. The glandular elements of the testicle were recognized under the microscope. The mass of the tumor situated above and around the testicle, and constituting about one-half the tumor's bulk, was found under the microscope to consist of the elements of connective tissue, consolidated by inflammation.

The microscopic examination of the specimen was made by Dr. J. W. J. Gouley.

It is evident that the tumor is an example of that rare pathological condition known heretofore by the English as "fœtal remains in the testicle," and by the French as "*inclusion scrotale et testiculaire*." The latter designation is the more intelligible of the two, as it indicates the nature of this curious growth, which is an imperfect effort at the production of a double monster, or "monstrosity by inclusion," or *fœtus in fœtu* of the older writers. It is described as one of the varieties under this latter head in Vrolik's classification of fœtal deformities, and he remarks that "it is most probable that the *fœtus in fœtu* is an incomplete effort to form a double monster." (*Cyclopædia of Anatomy and Physiology*, art. Teratology.) The term "monstrosity by inclusion" belongs to the great French teratologist, Geoffroy St. Hilaire, and has been adopted by Cruveilhier in his "*Pathologie Generale*," and applied to tumors containing fœtal remains which have occurred in different parts of the body, *e. g.*, in the perineum, over the sacrum, in the thoracic and abdominal cavities, the liver and ovaries, as well as in the scrotum.

This explanation of the pathological nature of these tumors has been more recently disputed by Lebert, who endeavors to include them in his class of "dermoid cysts," or misplaced growths of normal tissues. The pathological law under which all these growths are developed is thus stated by Lebert, (*Traite d'Anat. Path.*, t. i., p. 280.) "That both simple and compound tissues, and even more complicated organs, are capable of developing themselves in parts of the body where normally they do not exist." This he considers that he has established, and its truth is generally admitted by pathologists. But Lebert does not entirely exclude the theory of inclusion, as will be inferred from the following quotation: "I have brought together

three cases of dermoid cysts of the scrotum, and endeavored to establish the points of difference which distinguish them from true cases of foetal inclusion occurring in this same locality—in which undoubted debris of the skeleton are recognizable." (V. ut supra, p. 257.)

The theory of inclusion of St. Hilaire has also been disputed by the latest authority on the subject, Dr. George Murray Humphry, lecturer on surgery and anatomy in the Cambridge University Medical School, the author of the article on "Diseases of the Male Organs" in Holmes' System of Surgery, who considers that Lebert's theory of "heterotopie plastique" is entirely sufficient to explain the nature of tumors connected with the testicle containing foetal remains. (Holmes' Surgery, v. iv., p. 600.)

The question as to the real origin of these tumors appears, therefore, to be still an open one, and it may be stated succinctly as follows: Is a scrotal tumor, containing so-called "foetal debris," the result of a local plastic effort determined by injury or inflammation, and liable to occur at any period of life; or is it the production of a fecundated Graeffian vesicle accidentally included in the scrotum of a twin foetus, and thus arrested in its development, and of necessity congenital? This question is more curious than practically useful, for, as Dr. Humphry concludes, the only remedy for these tumors is to remove them by operation. Those desirous of pursuing it further will find it elaborately discussed by Lebert, (as above) by Cruveilhier in his *Pathologie Generale*, t. i. p. 370, and t. iii., p. 582, et seq., and by Verneuli in the paper referred to below.

It follows, if Cruveilhier is right, that tumors connected with the testicle of this character must be always congenital, and such appears to be the fact. M. Verneuil has collected all the authentic cases on record, to the number of ten in all, and treated the subject very ably and exhaustively in a series of papers published in the *Archives Generale de Medicine* in 1855. The earliest recorded of these cases is the only one of the ten in which the congenital character of the tumor is not clearly demonstrated. "A young man of quality, after exposure to sexual excitement, was seized with a sudden pain in the right testicle; this soon subsided, but shortly afterwards he discovered an unnatural growth connected with the testis, which rapidly in-

creased to the size of the head of an infant of six months, and within the year was removed by a surgeon of Sisteron, France, named St. Donat. On opening the tumor, after its removal, it was found to contain the somewhat altered remains of a foetal cranium; the testis was compressed and altered in appearance, and the foetal remains seem to have been enclosed in a cyst attached externally to the testis." The case was transmitted by St. Donat to Pierre Amand, a member of the faculty of Paris, and published by Amand in a volume on Obstetrics, at Paris, in 1715.

In a case reported by Prochask "an otherwise well formed male infant was born with a small tumor in the groin, which was taken for a hernia. When three years old it commenced to grow, rapidly filled the scrotum, and in a few weeks reached as low as the middle of the thigh, when an abscess formed and discharged a fetid fluid, together with several portions of the skeleton of a foetus, after which the child rapidly got well."

The following case, reported by Ollivier, (D'Angers) presents some features similar to mine: "Ovide-Emile Caze, well formed at his birth, was discovered by his parents, when a year old, to have the right testicle larger than the left, and six months later was operated upon by Dr. Capon, for hydrocele. A little serous fluid followed the puncture, but the testicle remained larger than before, so that two years afterwards another operation was talked of, but as the swelling was painless nothing was done. During his seventh year the testis, having reached three times its natural size, became painful, and an ulceration having taken place, a reddish mass protruded, in which Dr. Andre, having discovered a hard, white polished surface resembling a tooth, diagnosticated a tumor connected with the testis containing foetal remains." The protrusion increasing it was tied off, and afterwards examined by Ollivier, and found to contain four teeth and a piece of spongy bone, contained, apparently, in a sort of cyst. The child, who was left mainly to nature, was thought likely to get entirely well. (*Memoires sur la Monstruosite par Inclusion; Archives Generales de Medicine*, t. xv., p. 540.)

In Velpeau's celebrated case, which occurred in La Charite Hospital, in Paris, whilst I was an externe in that institution, in 1840, the patient, who was 27 years of age, had a tumor the size of the fist on the right side of his scrotum, which had ex-

isted since his birth. It was painless, and presented several fistulous openings, from one of which a tuft of hair projected, and this circumstance suggested the true nature of the tumor. Velpeau made it a point of saving the testicle, which could be distinguished from the tumor, although closely connected with it, and this necessitated a long and difficult dissection. The tumor contained much fetal debris and a number of easily recognizable bones of the fetal skeleton. The patient died of purulent infection. The case is recorded in the *Gazette Medicale de Paris*, Feb. 15th, 1840.

In M. Verneuil's case, which occurred in the wards of M. Guersant, in the Children's Hospital of Paris, the fetal debris were very carefully examined by the microscope, and, amongst other tissues, the histological elements of the gray substance of the brain were distinctly recognized.

Of the ten cases collected by M. Verneuil but two were diagnosed; those of Andre and Velpeau. If the congenital character of these tumors is admitted, it constitutes their most valuable diagnostic feature. The diagnosis would lie between hernia, hydrocele, encephaloid cancer and tubercular disease of the testis. It would seem easy to exclude the two former, although two of the cases noted in this paper were mistaken for hydroceles.

Robert speaks of a case of congenital soft cancer of the testis; and I once saw a well marked case of syphilitic enlargement of the gland in a child of eighteen months, who also had periosteal swellings and other evidences of inherited disease.

It is not unlikely that there are other cases of this curious affection which have not yet been placed on record, and if this imperfect notice of the subject should lead to any further additions to our knowledge by eliciting unrecorded cases, or by rendering their nature more apparent, it will have attained its object.—*New York Medical Journal*.

## EDITORIAL AND MISCELLANEOUS.

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AGAIN, after over four years absence of the Journal, we, under embarrassing circumstances however, reproduce it, and hope to be able, by the realization of moderate expectations of patronage, to furnish the medical reader with a periodical worthy of his encouragement and useful to him as a practitioner.

In the conduct of the Journal, free discussions on all scientific subjects will be allowed and encouraged, but no vituperation or personal abuse will be admitted to its pages. That course of moderation and independence which formerly governed its editorial management, will again characterize the Journal.

The system of medical ethics, embraced in "the golden rule," "Do unto others as you would have them do to you," will be observed and advocated.

As the exponent of the system of medical education adopted by the Atlanta Medical College, thorough instruction in all the medical sciences, and a proper understanding of them by the student, in order to admission to the degree, will be earnestly advocated.

While no captious objections will be made to the course pursued by sister Institutions, yet in the fearless advocacy of principles upon which the honor and usefulness of the profession and the public welfare depend, we will stand or fall. No party cliques or personal preferences shall swerve us from the path of rectitude, honor and usefulness. Institutions and Journals engaged in the great and philanthropic cause will not be viewed as rivals and marked as objects of distrust, malevolence, or envy, but will be recognized as co-laborers in the advancement of medical science.

Circumstances beyond our control have delayed the publication of the first number several weeks beyond the time

designated in the published prospectus; and the pecuniary embarrassments which, since the close of the war, interfere materially with all enterprises requiring money, have obliged us to curtail the number of pages originally intended. It will be seen, however, that we have correspondingly reduced the subscription price. The paucity of this number in original communications will doubtless be excused by our readers when they remember that the uncertainty of a forthcoming work of this kind discourages contributors in the preparation of articles till the Journal becomes "a fixed fact" by the issue of the "first number." To this department we attach the highest importance, and shall make early arrangements to secure contributors whose experience during the late war, and whose scientific attainments will insure articles unusually attractive and useful. The great dearth in medical literature during the past four years from the complete arrest, through the South, of the channels of communication, leaves in store upon the records and diaries of army surgeons and private practitioners, large accumulations of valuable information to the medical profession.

We desire to make our Journal a medium of communication to those who have at heart the advancement of our philanthropic profession. And we solicit contributions from those who have a disposition to write, either as *sporadic* communications or in the form of a series of articles reported monthly.

The small number of Medical Journals revived in the South since the war, and the inability as yet to obtain in exchange foreign, or but a limited number of Northern journals, confine our "Selections" to but few journals. We hope, however, soon to be able to give important items from all journalism.

As an advertising medium we expect, by giving it a pretty general circulation in Georgia, Alabama and Florida, with a more limited number in the States of North and South Carolina, Tennessee, Mississippi, Arkansas, Louisiana and Texas, to make the Atlanta Medical & Surgical Journal equal for this purpose to any publication of the kind. Our

rates of advertising, as will be seen by reference to PROSPECTUS in this number, are as moderate as the times will justify, and it is important to us in the fulfillment of our engagements for the publication of the Journal that payments be made promptly. We, more than heretofore, feel the necessity of requiring prompt cash payments for subscriptions, as well as advertisements. The amounts taken separately are inconsiderable, and may be met by the subscriber or advertiser without inconvenience, but in the aggregate become very important to the proprietors, and the publication of the Journal itself, without destructive drafts upon resources, that must necessarily be applied elsewhere, depends upon their payment.

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#### Atlanta Medical College.

The Eighth Regular Summer Course of Lectures in this Institution will be opened on the first Monday in May next, with a full corps of teachers. After four years of anxiety and toil in the discharge of professional duties in the field, in hospitals, and in private practice, five of the original faculty have "*reported for duty*" at the halls of science, where medicine and surgery for four years have been practiced, but are now taught. Two of our esteemed confreres leave us. Drs. H. W. Brown and J. W. Jones are compelled, from ill health, to sever their connection with the College. Their highly useful labors were coeval with the existence of the Institution, and while we feel warranted in saying that their places have been supplied by gentlemen every way competent and worthy, we can but feel sad in parting with those, who, in the trying hour of launching our bark upon the ocean of public opinion, stood faithfully by us in bearing "the heat and burthen of the day." May success and happiness attend them through life.

Besides the changes in the chairs of Anatomy and practice of medicine, an eighth chair—Surgical and Pathological Anatomy—which has not before been filled, is now supplied by a popular Confederate Surgeon in the recent war.



It will be seen from an announcement published in this number of the Journal that the Regular Summer Course of Lectures will be opened in the College the first of May. This will afford young men engaged in the study of medicine rare facilities for the rapid advancement in the pursuit of medical knowledge.

The great difficulty in the education of young men for the medical profession exists in the loss of time, and the loss of knowledge already obtained, during the eight months interval between the usual four months courses. The time spent in a private office is not generally so improved as to retain even till the next course what was learned at the last. And to a beginner the advantages above those found in private reading at home are equally important. The facility with which every branch of medical science can be taught during summer has been satisfactorily demonstrated here for several years, and the location, so far as convenience, comfort and health are concerned, affords no cause of complaint.

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*The local application of the Subnitrate of Bismuth to prevent pitting in Variola.*—In the American Journal of the Medical Sciences Dr. Wm. R. Hamilton, of St. Augustine, Ill., reports two cases of Variola in which he prevented pitting by the daily application of the Subnitrate of Bismuth and a black mask. In the first case he applied the Bismuth and Creta Preparata in equal parts, first lubricating the face with sweet oil; the application was made twice a day, the face being covered with a black mask. The eruption passed through its regular course, leaving but few scars perceptible on the face, the only part to which the application was made.

In the second case the eruption was confluent upon the hands and face. Dr. H. says: "There appeared to be but one pock from his eyes to his chin, as well as on the dorsal aspect of his hands." The Subnitrate of Bismuth, pure, was applied to the face and hands twice a day, after lubricating the parts with sweet oil, as in the other case. The face

was covered with a black mask; his hands were left uncovered. There is scarcely a pit to be found on the face; not one is perceptible on the hands.

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*Treatment of Scabies.*—From the “Medical Mirror” we learn that Dr. J. F. Nicholls, Surgeon to the Royal Wilts Militia, proposes the following plan of treating itch. He has tried it in several hundred cases, and has compared it with the plan of treatment adopted in other regiments, and finds it greatly superior to anything suggested. He declares that where the remedy is properly prepared and used it invariably effects a cure. Dr. Nicholls says:

“The remedy which I have adopted is prepared by boiling one part of quick-lime with two parts of sublimed sulphur, in ten parts of water, until the lime and sulphur are perfectly united; during the boiling it must be constantly stirred with a piece of wood, and when the sulphur and lime have combined the fluid is to be decanted and kept in a well stoppered bottle.

The way in which I have it applied is as follows: Every part of the body, with the exception of the face and scalp, is well rubbed with the preparation for half an hour, and then washed with soap and hot water. After the application an entire change of clean linen and clothing is put on. The patient’s linen is disinfected by being soaked in boiling water, and his clothes are freed from contagion by being subjected to a temperature of about 200 deg. Fahr., in an oven for a short time. When using the remedy for young children I have had it diluted by mixing one part of the solution prepared as above with three parts of water.”

From the Glasgow Medical Journal we learn that Dr. De Casine, physician to the garrison at Antwerp, proposes the *oil of petroleum* as an almost instantaneous mode of cure of Scabies in man. It not only kills instantaneously the parasite, but acts as a disinfectant against the larvæ found in the clothing. Dr. DeCasine has addressed a communication to the Belgian Academy of Medicine upon this mode of treatment.

# Atlanta Medical College.

The Eighth Regular Summer Course of Lectures in this Institution will commence, as heretofore, on the first Monday in May next and continue four months; at the close of which a public Commencement will be held for conferring the Degree of Doctor of Medicine.

## FACULTY:

J. P. LOGAN, M. D., Professor of Theory and Practice of Medicine;  
A. MEANS, M. D., Professor of Chemistry and Pharmacy;  
D. C. O'KEEFE, M. D., Professor of Anatomy;  
T. S. POWELL, M. D., Professor of Obstetrics and Diseases of Women and Children;  
EBEN HILLYER, M. D., Professor of Physiology;  
W. F. WESTMORELAND, M. D., Professor of Surgery;  
S. H. STOUT, M. D., Professor of Surgical and Pathological Anatomy;  
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An original Thesis, on some medical subject, in the handwriting of the student, must be presented to the Dean one month before the close of the session.

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For further information, address

J. G. WESTMORELAND, Dean.

Atlanta, Ga., February 20, 1866.

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## ORIGINAL COMMUNICATIONS.

*Kreasote in Diphtheria.*—By J. J. KNOTT, M. D., of Griffin, Georgia.

Owing to the speedy action and happy results following the use of Kreasote in Diphtheria, coming under my observation, I am induced to give, in a short article, the manner in which it has been employed by me during the past three years, in military and civil practice.

In the year 1863, while in charge of the Small Pox Hospital for Longstreet's Corps, Army of Northern Va., diphtheria prevailed to such alarming extent, as a sequel of that loathsome disease, variola, and the mortality was so great in the cases under my care, that I was induced to look out for some more useful mode of treatment than had been used in its management previously. Regarding the disease, in the earlier periods, as local in its character, and of a septic tendency, I determined to test the virtues of this powerful antiseptic, local alternative, and styptic.

The first case in which I used it, was a very malignant one; so much so, that at one time I had almost despaired of his recovery. The following formula gives about the strength in which the remedy was applied to the parts affected:

R Kreasote 3ji.  
Aqua Font. 3ji.  
Pulv. Acacia QS.

A sponge saturated with the Kreasote thus suspended in mucilage, was applied to the parts where the pseudo membranous exudations were exhibited, early in the afternoon. In a few hours another application was made, and, without further treatment, all the more violent symptoms disappeared during the night. On the following morning my patient seemed so much relieved that further treatment with the remedy was unnecessary.

Continuing this application in the treatment of subsequent cases, I lost no more cases from this disease.

After my return to the 53d Georgia Regiment, as Surgeon of that command, so successful was this mode of treating diphtheria, that it rarely, if ever, became necessary to send a case of the disease to the General Hospital, although several severe cases occurred in the regiment.

Since my return from the army, I have adopted this treatment in several cases of a decidedly diphtheritic character, in all of which much benefit was derived, and in one case particularly, which I distinctly remember to have been relieved almost entirely by one application, after suffering for a week under the ordinary treatment.

What has been said in this short article is intended, at least, to call attention to an important remedial agent in the treatment of a sometimes very troublesome and disagreeable disease.

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*Placenta Prævia.*—By L. P. GARRISON, M. D., of Cedar Town, Georgia.

The advised plans of procedure in the management of pregnancy with this anomalous attachment of the placenta, differ so entirely from each other, that the young practitioner must necessarily be greatly embarrassed in the conduct of a labor, and in the previous treatment, which is generally necessary for some months before the conclusion of gestation. When practicable, our efforts

should be directed to the safety of both mother and child, and the dictates of humanity, as well as our moral and professional obligations, would urge us to that course; but, when both must necessarily perish without such interference as will endanger the child, it is of course justifiable to make the sacrifice.

The following case exhibits that troublesome result, hemorrhage, to an unusually alarming extent, requiring, in the opinion of the writer, premature delivery for the woman's safety:

Was called, May 1st, to Mrs. S—, on account of uterine hemorrhage. Found her about eight months advanced in pregnancy, and the hemorrhage, though profuse, controllable by the usual means of cold applications and the internal use of acetate of lead. By the occasional use of lead, the bleeding was kept in abeyance for about a week, when I was again called in haste, owing to the excessive discharge. The difficulty was only temporarily arrested, returning at intervals of an hour or two, and in twenty-four hours from the time I arrived, became so excessive and alarming, that the production of premature labor was determined upon. For this purpose the ordinary doses of ergot were given at proper intervals, and persisted in for a reasonable time, without producing any perceptible contraction of the uterus. Muriatic acid was then resorted to, in the dose of three drops every fifteen minutes, and in less than three-quarters of an hour from the administration of the first portion, active labor came on. By passing the finger into the os, I readily detached the placenta for a short distance, but finding difficulty, at the time, in separating it entirely, forcibly pierced its center with the finger, making extensive laceration. The liquor amnii was immediately discharged, and the head, advancing rapidly, was soon engaged in the superior strait, pressing firmly upon the torn edges of the placenta.

The labor was concluded safely to the mother, without turning or further interference, in about two hours from the commencement of labor.

*Atlanta Medical Society.*—S. H. STOUT, M. D., President—H. S. WILSON, M. D., Secretary.

ATLANTA, February 13, 1866.

On the call for reports of cases, Dr. Word mentioned the fact that he had in preparation, the report of a case of *Placenta Prævia*, which he proposed to present in the form of a written report, at some future meeting.

*Dr. J. G. Westmoreland*, without making a formal report of any particular case, asked permission to call the attention of the Society to the subject of Variolous influence upon the foetus in utero, and elicit the opinion of members in regard to the period of the disease in the mother, at which the foetus becomes impressed; and whether or not, the mother and foetus receive the contagion at the same time.

*Dr. John Boring*, in response, reported a case in which a female had been vaccinated four weeks before delivery, (whether successfully or not, he was not informed). Three weeks after the alleged vaccination, and eight days before delivery, the eruption of variola appeared. Four days after the birth of the child, and twelve days after the eruption appeared upon the mother, it also exhibited the eruption of small-pox. This case evidently affords proof in support of the opinion that the disease is propagated in the foetus at the period of its full development in the mother; the time being about fifteen days of incubation for the child, counting from the febrile stage before eruption in the mother, to the eruption in her offspring. This is about the average period of incubation, and the foetus evidently was impressed with the disease about that time. The length of time from the reception of the virus by the mother to the development of the disease in the child, allowing fifteen days of incubation in the mother, would be about thirty days, entirely too long for the period of incubation.

*Dr. W. F. Westmoreland*, in connection with this subject, reported a case of small-pox in a woman, at about the seventh month of utero gestation. Three weeks after, when desquamation was complete, premature delivery occurred. The child, when born, had the eruption of variola, apparently of about eight days dura-

tion. These facts would fix the time of contracting the disease by the child, at about the febrile or eruptive stage in the mother, allowing the usual period of incubation.

*Dr. Alexander* desired, while the subject of small-pox was being considered by the Society, to hear the views of members in regard to small-pox being communicated before the eruption appears. He considered the question one of importance to the profession, inasmuch as the community feel a deep interest in getting at the truth on this subject. He had sufficient evidence to form an opinion against the probability of communicating the disease before the eruption appears.

*Dr. Hillyer* offered some theoretical views and arguments in support of *Dr. Alexander's* opinion.

*Dr. W. F. Westmoreland*, *Dr. Gonally*, and other members, believed that at any time during the febrile stage, before eruption, the disease could be communicated to others. Cases were cited by the advocates of each opinion, and on motion the opinion of each member was requested, when only ten had come to any satisfactory conclusion on the subject. Six believed it communicable before the eruption, and four, that it was not.

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MARCH 6, 1864

The Report of cases being in order,

*Dr. Alexander* reported a case of labor, in which chloroform was used, causing, as it would seem from this and others previously noticed, the suspension of lactation. He desired other members of the Society to give their experience in the use of this valuable remedy in regard to its effect in this way. No member had noticed this result; but in alluding to the effects of chloroform in obstetrical practice, several members alluded to the antihemorrhagic action, not only upon the uterus, but other organs. For this purpose it had been the custom of members to administer the remedy by the stomach, in half drachm to drachm doses, suspended in acacia mucilage. The subject taking a wider range, the general effects and uses of chloroform were discussed.

Other reports being called for,

*Dr. R. C. Word* made the following



## REPORT OF A CASE OF PLACENTA PRÆVIA.

Visited Mrs. H. first on the 16th March, 1861. Pregnant with her third child. Symptoms, pain in the back and some pain in the abdomen, which had existed for several hours with considerable flooding, though not sufficient to weaken, materially, the force of the pulse. She appeared somewhat flushed and excited, yet without undue heat or fever. Two weeks previously she had had similar symptoms. She was at the eighth month, and having miscarried in the previous pregnancy, we thought she was again threatened with a like result—an impression which was strengthened rather than removed by a vaginal examination, which revealed a soft and spongy condition of the cervix uteri exceedingly sensitive and tender to the touch, leading to the inference that the supposed threatened miscarriage was due to a diseased state of the os. The finger penetrated the neck an half inch or more, but did not reach the membranes or fetus. To pressure upon the abdomen the womb felt unusually soft and flabby, and on applying the ear, could distinctly hear the foetal heart on the right side of the mother. R—Patient to keep cool and quiet, and take one-third of a grain of morphine every three hours, until pain and hemorrhage ceased.

On the 19th, three days subsequent to last visit, again saw her. The flooding had returned to-day and the liquor amnii was discharging, but no pain indicative of labor. On examination found the mouth of the womb somewhat dilated, and the entire vagina and neck very tender. The placenta was detected directly over the os uteri. R—Patient to keep cool and quiet—cold applications to vulva; acid drinks and small doses tinct. opii oft repeated. To be sent for if at any time the flooding becomes alarming.

On the 20th, about thirty hours after, again saw her. The hemorrhage had recurred at intervals, and for a few hours past had largely increased, attended with uterine pains and slight bearing down tendency. The mouth of the womb was soft and dilatable, from which was pending a fold of the umbilical cord plainly pulsating. Decided to turn and deliver. Patient on her back—hips on the edge of the bed; and each foot in a chair. Par-

tial anaesthesia was induced with a mixture of one part ether and two of chloroform. The right hand well lubricated with lard, and dipped in warm water, was slowly and cautiously introduced. On reaching the placenta, found it more convenient to penetrate than to detach and pass round it, though there was considerable difficulty in rupturing the membranous envelop. The head was found above the brim with occiput toward the right acetabulum. First grasped a shoulder—supposing it to be a knee—then with some delay and difficulty found the left foot and brought it down—manipulating externally with left hand to aid the turning. The left foot was entirely without the vulva before the right could be found. There was now some pain. We gave a dose of ergot, and trusted for a time to the natural efforts of the womb. The pains became stronger. No hemorrhage. During the pains we assisted by traction upon the fetus, and the case progressed favorably until the head reached the rent in the placenta, when the pains suddenly ceased, followed immediately by great restlessness and distress on the part of the patient, with alarming evidences of exhaustion and sinking, the pulse being scarcely perceptible. The patient was ordered to be placed full length in bed, and hot toddy and ergot was freely administered for twenty or thirty minutes, but no reaction following, the fetus was then drawn forcibly and somewhat violently through the rent in the placenta, passing it with a sort of jerking sensation, and was promptly delivered, and the placenta also immediately removed. The patient began to rally in a few minutes, though there was tendency to flooding for more than an hour, which was treated with acid drinks and black drop internally, and cold applications to the abdomen, and warmth to the extremities.

It is scarcely necessary to mention that the child was dead. The time occupied in the delivery was one and a half hours, and the quantity of the anæsthetic inhaled, about two ounces.

This patient had a good recovery, being able to sit up in a few days.

The points of comment in this case are the following:

- 1st. The exceeding sensitiveness of the os tincæ and the vagina.
- 2d. The difficulty of the head passing the rent in the placenta,

and the great and dangerous constitutional disturbance caused by it.

- 3d. The probability of a shoulder presentation in this case, had the placenta been removed, and the labor trusted to the natural powers as recommended by some authors.

With regard to the exceeding tenderness of the os uteri and the vagina, we are not aware that it is mentioned by any author as a symptom peculiar to placenta prævia; yet in this case it was so great as to furnish an almost insuperable obstacle to a careful and proper examination of the parts. To such a degree indeed did it exist, that it misled me in the first examination, inducing the belief that there was cancerous or other diseased state of the os, from which the hemorrhage proceeded, and which was the cause of a supposed threatened miscarriage. If this condition exists in every case, it should be recorded as an important diagnostic symptom.

The obstacle furnished by the placenta, to the passage of the head, is another point overlooked by the authorities, and which is well worthy the attention of the profession, as it may furnish an argument against the mode of delivery by turning, and in favor of the plan advised by Prof. Simpson and others, of first delivering the placenta and then trusting the labor to the natural powers; for though the precaution of making a large and free rent in the placenta might, to some extent, lessen the obstacle, yet it is manifest that so large a body as the placenta, located in the narrow area of the neck and brim, must always furnish a serious obstruction to the delivery of the body and head of the foetus. Nor would the plan of detaching and passing around the placenta to reach and bring down the feet, better the case, but rather increase the difficulty; for it would be easier by traction upon the foetus, to distend and enlarge an opening already made, than to overcome or tear away the entire lateral half as would seem to be necessary in the latter operation.

The great and alarming constitutional disturbance occasioned by the obstruction to the advance of the child in this case, may happen in any case of obstructed labor; yet, as the books make no mention of it in placenta prævia, it is likely to alarm and mislead

the young practitioner. Under the head of "Symptoms of Powerless Labor," Dr. Dewees notices, at some length, this peculiar constitutional disturbance as indicative of obstructed labor. We have often observed this condition. It is characterized by an increased frequency of pulse, nausea, vomiting, hot skin, dry tongue, restlessness, hot vagina, an expression of great anxiety and alarm, with a sense of sinking. Such were the symptoms in this case. Our first impression was, that the patient was simply exhausted, or had taken too much chloroform, but finding that rest and stimulants did not relieve the patient, we immediately suspected that an obstruction had occurred, beyond the powers of the patient to overcome, and by using the necessary force to overcome the obstacle, had the satisfaction of seeing this opinion confirmed by an immediate reaction on the part of the patient, with relief, in a short time, from all the distressing symptoms.

Upon the third point we would remark, that the presence of the placenta in advance of the child, and occupying the space where the head properly belonged, appeared to interfere with the necessary adaptation of the occiput to the axis of the superior strait, and thereby to encourage a shoulder presentation. Such would undoubtedly be the tendency were the contractile efforts of the womb violent. If, then, the plan of first removing the placenta and trusting the case to nature were adopted, in any case, it would be well to remember this fact, and give early attention to the position of the head.

Upon the whole, the impression made upon my mind by this case is, that in every instance, where the placenta is fully over the os uteri, that turning should be resorted to as soon as the parts are in a condition to allow it, and under the relaxing influence of chloroform, this may be done sooner than is usually advised; that the placenta should be first hurriedly detached and removed, and the feet brought quickly down, and the body of the child brought in prompt apposition to the open and bleeding sinuses left by the placenta, in order to arrest the hemorrhage and save the strength of the patient. If, at this stage of the proceeding, there should, from any cause, be reason to believe that the child is dead beyond any hope of resuscitation, the case may here be trusted to nature,

and conducted as an ordinary foot presentation. But if the delay has not been long, and there is hope for the child, then the delivery should be as prompt as may be consistent with the safety of the mother.

If the detachment and removal of the placenta could in every instance be relied upon as a means of arresting the hemorrhage, then it becomes an important question whether, after so detaching it, the mother should be subjected to the operation of turning, in the hope of saving the child by a more rapid delivery than could be expected from the natural efforts. We think that the life of the mother should not be too greatly jeopardized to save the foetus; yet, it does not appear from the limited number of cases reported that we can calculate with certainty upon the cessation of hemorrhage on the removal of the placenta. On the contrary, in a considerable proportion of the cases, the flooding was not arrested, and turning, or other interference, was found necessary to hasten the delivery. But under the plan above proposed, the hemorrhage would not only be arrested, but in all cases where the parts were in good condition, the pelvic capacity ample, and the foetus relatively small, thereby making a rapid delivery practicable; we opine that the chances of life to the child would be greatly enhanced, while the danger to the mother would not be materially increased.

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*Notes of Clinical Lectures in Atlanta Medical College.*—By A. G. THOMAS, M. D.

Of the sixty-five cases presented to the class of Atlanta Medical College, from the middle of November, 1865, to the first of January, 1866, I propose to present to the readers of the Atlanta Medical and Surgical Journal, some brief notes of the most interesting ones which it was my good fortune to have the opportunity of taking from the lectures as delivered. I have the notes of only a few lectures now arranged for the press, but will furnish others in a series of articles for succeeding numbers of the Journal.

NOVEMBER 21.

*Dr. J. G. Westmoreland.*—A case of Icterus—Jaundice. The usual yellow hue observable upon the skin and albugines of the eye, is seen in this case. In regard to the pathology, he said the profession did not agree. The majority, perhaps, favor the opinion that the secretory function of the liver is deranged, and from that disturbance the principles in the blood, from which bile is manufactured in the liver, being retained in the circulation, are deposited in the tissues, which are found tinged with yellow. In accordance with this theory, the treatment usually adopted is such as is applicable to inactivity of the liver; cholagogue and tonic remedies. This is the rational treatment for such pathological condition, and would be found generally useful, were this the true pathology of the disease. The symptoms, however, in this case, as in all others, cannot be satisfactorily explained upon this theory, in my judgment.

In the first place, bile does not exist, as such, in the blood; and is not found deposited, as in jaundice, when from cirrhosis or other diseases of the liver, the secretion of bile is interfered with. On the other hand, where post mortem examination has revealed the presence of biliary calculi in the bile duct, obstructing the passage of bile from the liver to the bowel, the prominent symptom of jaundice, yellow hue, was found to exist. These facts seem to prove that bile is secreted by the liver before it is deposited in the skin and eyes, and that it is thus disseminated by being taken into the circulation through absorption, when obstruction exists to its passage into the bowel. In ordinary jaundice the obstruction usually exists in the duodenum, at the mouth of the bile duct. The rational treatment, according to this theory, would be to relieve that condition of the bowel, upon which the obstruction depends. Duodenitis, or engorgement and irritability of the duodenum, is the condition to which we should direct our remedies; and the rational course of procedure for the relief of this local derangement, is, according to my observation, the most effectual treatment of jaundice. Blisters over the epigastrium, mucilaginous drinks, opiates and alkalies, usually fill the indication.

A case of Intermittent Fever was also exhibited, the pathology of which he alluded to as a diseased or poisoned condition of the medulla spinallis, by that subtle, unknown agent called malaria. Intermittent and Remittent fever, he considered identical, and consequently required the same treatment. The great antiperiodic and febrifuge, quinine, generally removes the abnormal condition of this nervous centre, and in the restoration of its functions, the functional disturbance of other organs is abated. He does not usually premise the treatment by the use of colagogues, cathartics, emetics, &c., but advises quinine at the first abatement of fever.

*A case of Rheumatism in a scrofulous constitution.*—There exists constitutional predisposition to, or peculiarity of conformation suited to certain diseases, which is called *diathesis*. The scrofulous diathesis subjects the individual, from depressing influences, to the development of the degenerate substances, scrofulous and tuberculous deposits. The want of nourishing diet, exposure to damp and cold atmosphere, and an attack of ordinary disease, such as the case of rheumatism before you, may depress the energies of the system to the point at which these degenerate accumulations are produced; and in the case before you, there is a striking example of the difficulty met with in treating common diseases, in this form of constitution. The scrofulous deposits have doubtless occurred upon the very tissues involved in rheumatism, and may protract this disease, which of itself might be speedily cured, to an indefinite period. The skin, the bones—particularly about the joints—and the lymphatic glands, (especially the cervical,) are the tissues most subject to scrofulous deposits. The mucous surfaces (particularly of the air passages and bowels,) the lungs and brain, are the parts in which tubercular deposits are likely to occur.

In the treatment of rheumatism, acute articular rheumatism, unconnected with constitutional contamination, the course to be pursued is simple and effectual. Like intermittent and remittent fever, the primary disturbance most probably exists in the medulla spinallis, and of a character suited to the favorable action of that indispensable nervous tonic, quinine. The migratory character of the disease, often leaving the part affected, and suddenly attacking a healthy joint, without the usual results of ordinary inflammation;

establishes the fact that rheumatism is not a local disease, and that remedies directed to the painful and swollen joint cannot be permanently curative. Blisters to the spine, together with quinine and opium, arrest the progress of acute articular rheumatism, with as much certainty as the paroxysms of intermittent fever are broken up. The following is a favorite combination :

R Quinæ Sulph. grs. xx.

Pulv. Doveri grs. xxx.

M. et ft. chat No. iv.

Give one, morning, noon and night.

Or the following :

R Quinæ grs. xx.

Pulv. Opii grs. vijii.

Ft. Pillulæ no. vijii.

Sig. Two to be given night and morning.

*Reduction of a Dislocation of both Bones of the Forearm backwards, five months after the accident—with remarks.*—By W. F. WEST-MORELAND, M. D., Prof. of Surgery in the Atlanta Medical College.

Mrs. D——, of Cherokee county, Georgia, twenty-two years of age, medium-size, well developed muscular system, consulted me on the 1st of March, 1866, for an injury of the elbow-joint received five months previous.

She gave the following history of the case: On the 2nd of October, 1865, she was thrown from a buggy, and in the fall received an injury to the elbow-joint. A physician was called to see her soon after the accident, and assured her that there was neither a dislocation nor fracture, and that she need have no fears in regard to any serious results. Not regaining the use of the limb, in six weeks or two months after the injury, she consulted another physician in the vicinity, who told her that she had a displacement of the bones of the elbow-joint. He placed her under the influ-



ende of chloroform, and attempted the reduction, but after repeated efforts, failed to reduce the dislocation.

Upon examination, I found a dislocation of the ulna and radius backwards; the arm almost straight, with not the least motion of the elbow-joint. The articular surface of the humerus was resting upon the anterior surface of the bones of the forearm; the internal condyle was readily detected, an inch to an inch and a half below and anterior to the olecranon process; the coronoid process of the ulna evidently resting in the olecranon fossa.

After giving her, in detail, the difficulties and dangers of an attempt at reduction, with the many chances of a complete failure, she did not hesitate to decide to have the effort made.

On the 2d of March, just five months after the accident, assisted by Drs. D'Alvigny, Crawford, Orme, Ray and Westbrook, I succeeded, in the following manner, and without any great difficulty, in reducing the dislocation:

The patient was placed upon the edge of the bed, partially turned upon the side corresponding with the injured arm, with the shoulders slightly elevated by means of pillows.

When she was fully under the influence of chloroform, I seated myself upon the edge of the bed, and with my knee in the bend of the arm, forcibly, but slowly, flexed the arm to near a right angle, thus breaking up the new attachments, and putting upon the stretch, and to a certain extent, elongating the triceps muscle. After several times forcibly flexing the arm in this way, one assistant grasped the forearm with me, while another placed his forearm in the bend of the elbow, so as to act more directly upon the articular surface of the humerus than could be done with the knee; the knee, however, was kept in the same position, and not only assisted the arm of my assistant in making counter-extension, but by its contact with the bones of the forearm when the arm was flexed, acted as a fulcrum to raise the coronoid process out of the olecranon fossa and over the articular surface of the humerus. Extension was now made, commencing with the arm flexed to an angle of about forty-five degrees, and as the extension was continued, gradually approached a right angle. The extension was continuous, and the force gradually increased. In a very few

minutes, it was evident that the soft parts were yielding, and that the bones were changing their position. In less than twenty minutes after extension was commenced, the reduction was accomplished. The forearm was now flexed at a right angle, and secured in that position by means of adhesive plaster passed from the forearm to the shoulder and to the arm.

A decided dose of sulph. morphine was administered, to be repeated every few hours if the pain, which immediately after the reduction was excruciating, continued. The application of cold to the elbow-joint was continuous. The pain continued for twenty-four hours. The tumefaction at the expiration of forty-eight hours was considerable—extending from the wrist to the shoulder. The pulsation in the radial artery, immediately after the reduction, was barely perceptible, but gradually increased in fullness until, at the expiration of three or four days, it differed but little, if any, from the radial artery of the opposite side. The functions of the ulnar nerve were also considerably interfered with. For several days there was a complete paralysis of the little finger, and partial paralysis of the ring and middle finger. The sixth day after the reduction, the tenderness and tumefaction had, to my surprise, subsided to a considerable extent. On the seventh day passive motion of the elbow-joint was commenced and continued once a day.

The day she left for her home—the fourteenth after the reduction—the tenderness, tumefaction and paralysis had greatly subsided, and she was able to slightly flex and extend the forearm.

Was the attempt at reduction in this case justifiable? As it terminated, the patient was greatly benefitted, but had an accident occurred, resulting in the loss of the limb or the life of the patient, what would have been the verdict of the profession? In other words, are we justifiable in attempting the reduction of a dislocation of the elbow-joint five months after the displacement?

In my judgement the attempt should always be made where there are no marked contraindications to the procedure. The standard authors, however, of the present day, as will be seen from the following extracts, do not justify the effort. M. Vidal, in his work on *External Pathology*, in discussing neglected dislocations of the elbow-joint, says:

"According to Boyer it is rarely possible, after a month or six weeks, to reduce this dislocation. A. Barard mentions a case reduced by Desault two months after the accident. M. Malgaigne, and M. Lisfranc, is said to have reduced an incomplete dislocation after near four months."

Prof. Gross, in his *System of Surgery*, says: "It has long been a question with surgeons at what period, after the occurrence of a dislocation, it should be considered as impracticable to effect reduction. The question, as might have been expected, has been differently answered by different observers, and by the same observers for different joints. Thus, Sir Astley Cooper, who has always been regarded as the leading authority upon the subject, thought that three months for the shoulder, and eight weeks for the hip, might be set down as the limit beyond which any efforts of this kind, except in persons of very lax or advanced age, would be highly imprudent—an opinion which accords so well with general experience as, in my judgment, to entitle it to be considered as a law. It cannot be denied that the law has exceptions, but this only serves the more fully to establish its validity. Thus, in relation to at least one of the joints in question, quite a number of cases have been reported of reduction, at from four to seven months after the receipt of the injury." He further says: "For the ginglymoid articulations the period is still more limited, although, in this respect, it varies a good deal among themselves. In relation to the elbow-joint, which is the best type of the ginglymoid class, I have found, in quite a considerable number of cases, that any attempt at reduction, however perseveringly or judiciously continued, will generally prove completely abortive after the third week."

M. Nelaton, in his most excellent work, *Pathologie Chirurgicale*, in speaking of dislocations backwards of the bones of the forearm, says: "In a very short time they become irreducible. Still Boyer succeeded in reducing one six weeks after the accident in a child ten years old. A. Cooper reduced one several weeks after the accident; Desault succeeded in one case at the end of two months. M. Malgaigne mentions a case reduced by M. Lisfranc, at the end of four months—he regarded it as incomplete."

From Prof. Hamilton's work on *Fractures and Dislocations*, we make the following extract. In speaking of dislocations of the elbow-joint, he says: "If much time has elapsed since the occurrence of the dislocation the reduction is accomplished with difficulty, if, indeed, it can be reduced at all. There are many cases upon record, however, in which surgeons have been successful after the lapse of many weeks, or even months."

Boyer thought it was not possible to effect the reduction after four or six weeks; but Cérpelletti, of Trieste, succeeded after seventy days; Sir Astley Cooper at three months; Malgaigne after three months and twenty-one days. Roux succeeded in the case of a young man twenty-two years of age, whose elbow had been dislocated five months. Blackman, of Cincinnati, informs me that he has reduced a lateral dislocation after five months. Brainard, of Chicago, reduced a dislocated elbow, in a boy of nineteen years, after five months and thirteen days. In this case the Surgeon who had first seen the patient supposed that he had reduced the dislocation. Gorre, Gerdy and Drake, succeeded in four cases after six months; and finally Starch claims to have been successful after two years and one month. To which enumeration Denance has added seventeen other examples, said to have been reduced at various periods, ranging from one month to one hundred and fifteen days.

Nevertheless, the fact is in the main as stated by Boyer; and if so many cases can be found in which Surgeons have succeeded at a later period they are not probably in the proportion of one to ten as compared with the failures; but the failures have not received the same publicity. Nor indeed have all the severe accidents, such as violent inflammation, suppuration, gangrene, and even death, been faithfully declared.

From the *Science and Art of Surgery*, by John Erichson, we take the following. In speaking of neglected dislocations, this distinguished author says: "The latest period at which reduction should be attempted varies much according to the nature of the dislocation. It may be successfully practised at a much later period in the luxations of the orbicular than of the hinge joints; and it is especially in the shoulder that these late attempts may be advantageously undertaken. According to Sir A. Cooper, how-

ever, the latest period at which reduction, even in this articulation, can generally be successfully effected does not exceed three months and eight weeks for the hip; but within this time it may often be safely accomplished."

It is evident, from the above extracts, that our standard authorities, not only do not approve attempts at reduction in neglected dislocations of long standing, but regard such interference as entirely unjustifiable. They admit the numerous successes upon record, but still hold on to the dogma of Boyer and Sir Astley Cooper.

Notwithstanding my high appreciation of the above mentioned authors, still I am firmly of the opinion that in all favorable cases, that is, where there are no complications, as fractures, compound dislocations, extensive injuries of the soft parts, followed by abscesses, caries of the bone, &c., that if presented in a reasonable length of time after the accident, we should attempt the reduction. I will not say in one, four, or eight months, but let the length of time in each individual case be decided upon its own merits. It is evident to all, that age, sex, temperament, the character of the muscular system, the intensity of the inflammation immediately after the accident, and many other considerations, so influence the difficulties in different cases, that a dislocation of the same joint would be easier reduced at four months in one subject than in another, where the surroundings were more unfavorable, after two months.

The frequency and dangers of accidents which sometimes result from attempts at reduction, have, I am confident, been greatly magnified. Within the past fifteen years I have witnessed, both in the hospitals of Europe and America, a number of attempts at the reduction of old dislocations, and have made several myself, but in no instance have I seen any unpleasant results. If the necessary precautions are taken in the selection of cases, as well as the mode of conducting the effort, with the force properly graduated, accidents will be of rare occurrence.

## SELECTIONS.

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*Nitrous Oxide and other Anæsthetics.*—By J. M. CARNOCHAN, M. D., Surgeon-in-Chief to the State Emigrant's Hospital, New York, etc., etc.

I desire to present through the pages of the "Medical and Surgical Reporter," a general statement of the facts respecting three surgical operations which I performed, using nitrous oxide gas, administered by Dr. Colton, as the anæsthetic, and my opinion on the value of this agent as compared with chloroform and ether.

The first operation took place on the twenty-second of last July, and was the removal of the entire breast, and glands of the axilla, for cancer. The patient, a lady in feeble health, was suffering from disease of the throat and lungs and general debility. In thirty-five seconds from the time she began inhaling the gas, she was in a profound anæsthetic sleep. She remained insensible for sixteen consecutive minutes, until the operation was completed, and in forty seconds, from the time the bag was removed, awoke to consciousness without nausea, sickness, or vomiting, as is so often the case with inhalation of chloroform and sulphuric ether.

The second and third capital operations occurred at the State Emigrant's Hospital, on the second of December, and consisted of two amputations of the leg. The time required to produce an anæsthetic sleep in the first patient, a male adult, extremely debilitated and worn out by disease, was forty-five seconds; whole duration of the operation and influence, two minutes and a quarter. No nausea or unpleasant symptoms.

The third operation was on a boy of about thirteen years of age. The time consumed in the inhalation, operation, and recovery from the anæsthetic sleep was two minutes, the gas working equally as in the other cases, and the patient, after complete anæsthesia, awaking entirely free from unpleasant symptoms.

For minor operations, or for capital operations, such as amputations, which, when properly performed, should require but a few minutes, I have no hesitation in stating that the nitrous oxide gas,

as an anæsthetic, is far superior to either chloroform or ether. Insensibility is suddenly produced, and the patient recovers consciousness quickly, the operation being attended by no nausea or sickness, and without the dangerous effects often incident to chloroform and ether.

It is worthy of remark that the nitrous oxide gas approximates, in its chemical combination, to the composition of the ordinary atmosphere, and we may thus, inferentially, account for its more favorable influence. Whether it can be used in operations, which from their nature require from half an hour to an hour's time, remains still to be proved by actual experiment.

The duration of the anæsthetic influence in the case of the first operation, previously alluded to, is the longest on record; and I may here state that this is the first capital operation performed under the influence of the gas, since the great discovery of Wells, of Hartford, twenty-two years ago, that a harmless sleep could be produced by a chemical agent, which could annul for the time being the greatest suffering. It is not at all improbable that had Wells lived and had the boldness to follow up his early successful experiments, chloroform and ether would never have been thought of as anæsthetics.

To T. G. Colton is due the credit of reviving the use of this important agent, in the practice of dentistry, after a lull of twenty-two years.

The value of a safe anæsthetic agent, which can be used without anticipation of danger by the patient, is a great boon to suffering humanity, and I have related thus minutely its action in my own cases, in the belief that similar favorable results met with by others in the nitrous oxide gas will supersede all other anæsthetics now in use.—*Med. and Surg. Reporter.*

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ART. III.—*Excision of the Tongue.*—By JAMES SYME, F. R. S. E., etc.

About twelve months ago I communicated a case in which the tongue had been completely removed by excision, on account of extensive disease that threatened to prove fatal by preventing the admission of nourishment. This account was necessarily limited to the operation and its immediate effects, as sufficient time had not elapsed for determining whether or not the relief afforded would prove permanent, or how far the powers of deglutition, articulation,

and taste would be restored.' After his return home to Manchester, the patient sent me favorable reports of his progress, but certainly not such as to convey an adequate idea of the improvement that had taken place since he came under my care. He was then emaciated and bent down by long-continued suffering, unable to articulate, so as to require a slate and pencil for expressing his wishes, and swallowing even fluids with such extreme difficulty as to feel on the point of starvation. My surprise may, therefore, be imagined when on the 10th of September last he unexpectedly made his appearance, erect and vigorous, and, seeing that I did not recognize him, announced his name in a loud, clear voice. The feeling thus excited was not lessened by learning that while traveling in the Highlands he had dined at a table d'hotes, and entered into conversation without betraying the deficiency under which he laboured. Very much astonished by a result so much better than could have been anticipated, I requested a number of my medical friends to join me in examining the state of matters. Professor Goodsir and Mr. Nassmyth having satisfied themselves that no vestige of the tongue remained, various observations were made with regard to articulation and other functions of the absent organ; and Mr. Annadale afterward instituted a more particular inquiry, of which he has given me the following report:

"The lips and jaw-bone, where divided, were soundly united without any deformity. The opening between the mouth and pharynx was much diminished in size and irregular in shape from contraction of the fauces and soft palates, which were drawn downward and forward more to the right than to the left side, from the mucous membrane at that part having participated in the disease and been removed along with the tongue. Mr. W. says that he can swallow as well as ever, provided that the food is finely divided or fluid. He is also able to masticate solid substances, although difficulty is sometimes experienced from their getting into awkward parts of the mouth. In ordinary speech his words are wonderfully clear and distinct, and he can sing without difficulty. All the vowels and words composed of them are articulated perfectly, and also the following consonants: B, C, F, H, K, L, M, N, P, Q, R, V, W. D is pronounced "dthe," J "the," G like "ajee," S is a lisp. His taste is impaired, but still enables him to distinguish different articles and their respective qualities, as grouse from partridge, bitters from sweets, good beer from bad beer, etc. He has remarked that the seat of sensation lies somewhere in the throat, since there is no recognition of taste previous to the act of swallowing; and, in order to ascertain the truth of this point more precisely, the following experiments were made:



"1. A strong solution of salt was applied, by means of a camel-hair brush, to the fauces, palate, floor of the mouth, lips, and inner surface of the cheek, with the result of something being felt in the mouth, but no idea formed as to its nature.

"2. About a quarter of a teaspoonful of finely powdered sugar was placed on the floor of the mouth, and having been allowed to remain there a few seconds, was then brought thoroughly into contact with every part of the cavity without any recognition of its nature; but when a little water was added and swallowed, the taste was immediately perceived.

"3. The same experiment was repeated with another substance (salt), and with the same result."

It has long been known that large portions of the tongue may be removed without destroying or materially impairing the power of articulation, but I am not aware of any case on record in which it has remained so perfect after complete removal of the organ. Of the facts above mentioned, the one that seems most curious is the connection between taste and deglutition; from which it appears that the latter is essential for the full perception of the former. If the pleasure of taste could be perfectly gratified by mastication without deglutition, there would be no limit to the consumption of food; but the instinctive desire to swallow an agreeable morsel affords a check to any such abuse.

As the nature of the disease was not particularly described in relating the operation, the microscopic structure exhibited by the tumor (for which I am indebted to Mr. Annadale), may be given to show that it possessed the character of epithelial cancer.

[*London Lancet*, Jan. 27.

Ruteland Street, Edinburgh, January, 1866.

In the "*London Lancet*," February 3rd, is a communication from Dr. Wm. McCormack, of Belfast, drawn out by the above report of Professor Syme's case. He thus remarks: "During the winter of 1857, I remember seeing in the reception hall of the Imperial Academy of Medicine, a man from whom M. Ricord had excised the entire tongue some time previously. I looked into his mouth, and saw that there was not a remnant of the tongue left. He was of middle age, well nourished, and contented-looking. I was inexpressibly surprised upon hearing this man talk fluently and with perfect ease, and as far as I could detect, without any deficiency whatever in the power of articulation." G. C. B.

[*Cincinnati Journal of Medicine*.

5. *Horsehair as a Substitute for Wire.*—By THOMAS SMITH, Esq.,  
Demonstrator of Anatomy at St. Bartholomew's Hospital, and  
Assistant Surgeon to the Hospital for Sick Children.

Experience has ere this fully justified the claims put forward by Dr. Marion Sims, Dr. Simpson, and others, for the advantages of the metallic suture over threads of organic origin. For ordinary purposes, the cleanliness, security, and unirritating nature of silver wire leave but little to be desired in the way of improvement in material, and though in most cases such sutures answer all purposes for which they are designed, yet to some localities and to certain tissues they are not well suited. The adjustment of wire sutures to wounds of the eye-lid, foreskin, scrotum, and other parts where the integuments are lax and delicate in texture, is difficult, and their withdrawal is painful, and liable to cause rending and laceration of the freshly united edges. The difficulty of introduction consists in the laxity of the parts, disposing the edges of the wound to twist and coil up far more readily than ends of the wire; while the withdrawal of the sutures is painful, owing to the rigid condition the wire assumes before its removal, and this occurs notwithstanding every precaution that may be taken to anneal it previous to its introduction. In allusion to this inconvenience, Dr. Mott, in his work "On Surgery," in speaking of metallic sutures, makes the remark: "The introduction of wire sutures is easy enough; the withdrawal is often attended with great inconvenience, and even with risk of tearing the imperfectly united edges of the wound asunder." (Vol. i., p. 335.)

With a view of finding a material for sutures as unirritating and as unabsorbent as wire, but more easy of adjustment and withdrawal, I performed during last spring a series of experiments on animals, to determine the suitability of horsehair as a substitute for wire in certain cases. The horsehair used was such as is ordinarily sold, by fishing-tackle makers. The experiments were performed upon dogs. The general results showed that there was no appreciable difference shown by the tissues in their tolerance of silver wire and horsehair. Both materials were equally unirritant; yet there was a difference in favor of the horsehair in the great facility of its adjustment and subsequent removal.

For the comparison between silk and horsehair, as illustrating the relative merits of the two materials for sutures, I venture to refer to the following experiments:

June 10th, 1861. Two wounds of equal length, dividing the

entire thickness of the integuments, were made on opposite and corresponding parts of a dog's abdomen; four sutures were applied at equal intervals to each, horsehair being used to one wound, and fine ligature silk to the opposite. On the third day, both wounds looked alike healthy, and having their edges in close contact. On the fifth day, the edges of the wound with silk sutures were slightly reddened, and pouting a little between the points of suture; the opposite wound had united without suppuration. On the eighth day, three out of the four silk stitches had cut their way out, and the next day the remaining one came away, leaving the edges of the wound just separated, but granulating healthily. Three days later the wound had almost entirely healed. At this time the opposite sutures, which remained *in situ*, exciting no irritation whatever, until the dog's death, a month after the commencement of the experiment.

May 3rd. The femoral arteries of a dog were exposed to the same extent, just below Poupart's ligament. Around the vessel on the right lower limb was passed a stout horsehair, and loosely tied, a suture being similarly adjusted around the opposite artery. A month after the operation the wound on the right side was all but healed, and was secreting a little serous discharge. At the same time the wound on the left side was swollen, its edges were everted and inflamed, and had a profuse sanio-purulent discharge. Two days later the wound on the right side had healed around the track of the horsehair seton, which was retained, while around the silk on the other side there was profuse suppuration; the surrounding parts were red, tender, and much swollen; and as the animal's general health was suffering, and was rapidly emaciating, the silk was withdrawn. The wound now speedily altered its character, and by June 20th was soundly healed. September 3rd, four months after its introduction, the horsehair still remained around the right femoral artery, exciting no irritation, the parts being soundly healed around the track of the seton.

The unirritating nature of horsehair, as a material for suture, is no less marked when applied to the tissues of the human body. It was used by Mr. Paget in a case of double entropion, the wound of the operation being in one eyelid secured with horsehair sutures, while the opposite was brought together with fine sewing cotton. At the end of the week, three out of the four cotton sutures had cut out, while at the same time all four horsehair sutures remained firm.

As a material for attaching the margins of the skin, and mucous membrane after circumcision, or other operations for phimosis, I have found horsehair most useful, having employed it both in children and adults. In one case particularly, where a complete circum-

cision of the foreskin, with a free division of the mucous membrane, was performed on a middle-aged gentleman, its good effect was remarkable. Six sutures were introduced, and excited so little disturbance that the patient was not kept for a single day from his business, which involved pretty active exercise. The wound healed without suppuration, and though left in, at the patient's request, some of them for fourteen days, the sutures caused no irritation, and were removed at last without difficulty. In the removal, the advantage of horsehair sutures over the wire is considerable, since, unlike wire, which, after remaining a few days in a wound, stiffens into a metallic ring, horsehair, when cut just aside the knot, either retaining its original elasticity, springs open, or if it has been long soaked in the wound secretions, it becomes soft and pliable. I would recommend this suture for wounds of the eyelid and other parts of the face, and for the loose integuments of the scrotum and penis; since to all these parts I have either applied the suture myself with good effect, or I have seen it used by others at my suggestion.

But I can imagine that there are other uses to which it might be extended, and especially to facilitate the union of wounds of the conjunctiva. For the purpose of suture, long white tail hairs are the best. Before being used they should be soaked for a minute or two in water, or they may be drawn once or twice through the moistened finger-ends. The suture may be fastened with a double knot, but if the hair is stiff, a third knot is often required. It may be removed in the ordinary manner, seizing the knot with the forceps, and dividing the suture just aside of it. It is scarcely necessary to remark, that horsehair, as a suture, is not suitable for wounds, where there are much tension between the edges.—*Lancet*.



*Whether Cholera is Contagious.*—By JACOB BIGELOW, M. D.

Within the present century, cholera, a disease indigenous in hot climates of the East, has, at various intervals, made its appearance in the temperate latitudes of Europe and America. It is now again exciting interest from its possible and perhaps probable approach to this country.

The experience of the last thirty or forty years has led a majority of medical men who have observed the disease to believe that, as a general law, it is not contagious. In this belief I must

individually remain, until evidence more satisfactory than any which has yet appeared shall justify an opposite conviction.

The great epidemic of 1830 and 1847 had a remarkable coincidence in the path which they pursued, and in the order and dates of their arrival in different cities. They seem to have followed certain great routes of travel, and to have avoided others equally frequented. According to Lesegue, they both visited consecutively, and in corresponding months, Tiflis, Astrachan, Moscow; Petersburg and Berlin. In 1831, cholera did not take the most frequented route from Berlin to Paris, but passed along the shores of the Baltic, crossed over to Sunderland, went down to London, and again crossed the channel and arrived in Paris about six months after its appearance at Berlin. A disease propagated by contagion of any kind would hardly have avoided the most frequented thoroughfares from Berlin to Paris, while it occupied half a year in going round by England.

The epidemic now or lately prevailing in Europe appears to date back at least nine months, at which time it existed among the caravans of pilgrims visiting or returning from the city of Mecca. In the middle of May last it was at Alexandria and Cairo, in June at Constantinople, Ancona and Marseilles, and in November at Paris, Havre, and other European cities.

Thus it appears that cholera has now existed in Europe from three to eight months, among cities having constant commercial intercourse with seaports of the United States, during which time thousands of passengers and tens of thousands of bales and packages have been landed in our maritime cities. If cholera were as contagious or portable as many believe it to be, it ought to have begun, and perhaps finished its work in many of our seaports before this time.

Epidemics require two things for their introduction and extension. These are—first, predisposition in the inhabitants of the place visited; and, second, the arrival or presence of an exciting cause. This cause in some epidemics, such as small-pox, is contagion. In others it is an occult influence, not yet discovered nor understood, nor known to be controlled, except in some instances, by hygienic agencies. No country, I believe, has succeeded in keeping out cholera by quarantines, and no country, as far as we know, can produce it artificially or retain it after the predisposition has disappeared. In its own time it moves on thoroughfares where men are travelling, and spreads in cities where they are stationary, for no better known reason than that mankind are its necessary food, and that where there are no people there can be no cholera. But why, of two frequented roads or cities, it selects

one and avoids the other, investigators have not yet been able to satisfy us.

The credit of having introduced the present epidemic into Europe, is by a sort of popular acclamation assigned to the hosts of squalid devotees who perform an annual pilgrimage to Mecca. Yet we are told that "the cholera exists every year among the caravans of Mussulmans arriving at the holy cities," so that their supposed mission of forwarding the cholera to Europe, in most years fails to be performed.

Cholera, like influenza and some other migratory diseases, has usually but not always advanced from east to west. Of the vehicle in which it travels, or the course it is next to take, we know about as much as mankind knew of the cause of lightning before the discovery of electricity. Its conveyance and propagation have been ascribed to air, to water, to material foci, to electricity, to ozone or to the want of it. Of late, in consequence of the vast development by the microscope of the existence everywhere of minute living organisms, it has become more common to ascribe the arrival of this and other like epidemics to certain unseen "germs" which are called seeds or ova, cryptogamic or animalcular, according as the fancy of the theorist inclines him to adopt a vegetable or an animal nomenclature.

But in this, as in many other cases, it is easier to trace an analogy, or assume a cause, than it is to prevent an effect. Although inquirers have been indefatigable in their attempts to enlighten the world on the means of ridding ourselves of the various offensive occupants of our globe, yet no crusade has yet succeeded in banishing from our fields and houses the unwelcome swarms of mosquitoes, worms, grubs and flies, which molest us with their annual presence; nor in suppressing the blight of grain, the potato rot; or the peachtree disease. Happily some, if not most of these have their periods of abatement or disappearance, and this rather through the order of Providence than the agency of man. Cholera seems to abide in the same category. We know little of its exciting cause, and not much of its prevention, except that by following in our personal habits the dictates of reason and experience, we diminish both the frequency and danger of its occurrence.

Whatever may be the cause or vehicle of cholera, credulous and excitable persons are impatient of suspense, and are prone to cut a knot which they fail to unite. When an epidemic disease first appears, some coincidence is always brought to light which is supposed capable of accounting for it. The arrival of a ship, the opening of a trunk or the washing of a garment, are among the most frequently accepted causes. But as these events have happened a

thousand times before, and apparently under like circumstances, without any known results, it has been thought necessary by some of our later writers to narrow the compass of exposure down to the reception of the morbid exertions of individual into the digestive canal of another. The first impression made by this announcement must, if true, be one of relief, the danger not seeming likely to happen very often. But to the possibility of such danger we can never oppose an absolute negative, so long as we persist in eating smelts and flounders caught about the mouth of our drains, or even turnips, salads and strawberries raised at Brighton. The risk, however, is so small, that most persons will prefer to take it, rather than to deprive themselves of food or luxuries.

Of the many sensation tales printed and reprinted about cholera, and the supposed instances of remarkable communication or arrestation, it is sufficient to say that they are frequently interesting, being fully as dramatic as they are probable.

In the same regard we cannot help noticing that credulity, and perhaps private cupidity, has caused much stress to be laid on the supposed preventive efficacy of what are called "disinfectants," a mysterious word which implies a thing assumed but not proved to exist. We have deodorizers, such as chlorine, charcoal, &c., which by their combinations render certain effluvia imperceptible to our sense. But that these are not *disinfectants*, there is most abundant evidence. The narrative, then, of the physician of Malta, who covered certain surfaces in vessels with oil, and had them "disinfected by chlorine gas," after which "no new cases occurred," is to be classed with other like results, with which the medical press always abounds at the close of epidemics.

In clean and well-regulated cities of temperate climates, cholera is far from being the most formidable of epidemics. A greater part of its victims are the miserably poor, the worn out, the ill provided, and the intemperate, in whom this disease only anticipates the date, but does not greatly increase the annual or biennial number of deaths. Its mortality in our northern Atlantic cities rarely amounts to one per cent. of the population in a given place or year, so that a man may reside through an epidemic in one of these cities with less risk than he can take a pleasure voyage to Europe. After having witnessed many cases of cholera in this and other cities, I am farther satisfied that it affords one of the easiest modes of exit from the world.

People who would avoid or prevent cholera should cultivate equanimity, regularity of life and habits, cleanliness, salubrious exercise, temperance, and avoidance of all excess. When they have done their duty in providing for the care of the sick, allaying

public panics, and abating public misgivings, they may safely dismiss their apprehensions. Little good and some harm is always done by the indiscreet agitation of a subject which is to a great extent beyond our control. A single or sporadic case of cholera occurring in a village of a thousand inhabitants may attract little notice, and perhaps pass without record; but a hundred cases in a city of a hundred thousand inhabitants make an aggregate which generally causes some panic, though the proportion is exactly the same, and the panic equally unnecessary. It is possible that the supposed immunity of country districts in comparison with cities may be accounted for by the fact, that in the sparse population of country towns cases are less liable to be detected and published.

I may be excused for repeating the following remarks from among some "Aphorisms" published by me about thirty years ago, when the disease was new and little known among us. "Should cholera continue to prevail for three years throughout this continent, it would cease to interrupt either business or recreation. Mankind cannot always stand aghast, and the wheels of society at length would be no more impeded by its presence than they now are by the existence of consumption, old age or drunkenness."

*Case from Prof. Greene's Clinic.—Berkshire Medical College.—*  
Reported by FRANK S. ABBOTT, M. D., Clinical Clerk, and  
communicated for the Boston Medical and Surgical Journal.

CASE I.—*Morbus Coxarius*.—Mary C., aged four years. Was always healthy until about eight months ago, when she began to complain of pain in the left knee, limped a little, was restless and oftentimes feverish at night; lost appetite, flesh and strength. For the last three months has not walked at all, or at least has borne no weight on her limb. For the last four or five months she has complained more or less of pain in the hip, but not severe. She is now pale and emaciated. On examination of the affected limb, it was found smaller than the other, and apparently longer than its fellow. Upon measurement, however, there was no difference. Absence of swelling or tenderness, and freedom of motion at the knee, excluded that joint as the seat of the disease. Deep pressure over the *ileo-femoral* articulation gave her great pain. The muscles about the hip were wasted, giving it a flattened appearance, and the *ileo-femoral* line was almost entirely obliterated. Pressure on the sole or at the knee gave her much pain. Upon



carefully questioning the mother, she remembered that about eight months before, while running, she fell and cried, "Oh mother, I have hurt my hip," but was soon at play again as before.

Prof. G. remarked that this was a typical case of coxalgia. The early pain in the knee, without other evidences of inflammation—this being merely a reflex symptom, and one of the most prominent in the early history of this malady—the marked constitutional disturbance at this time showing that some important organ was suffering, the gradual accession of pain and tenderness at the hip, the flattening, the pain upon pressing the caput femoris against the acetabulum, all pointed unequivocally to the nature of the disease. The elongation of the limb was merely apparent and not real, as ascertained by measuring from the superior spinous process of the ilium to the malleolus. It occurs from the tilting of the pelvis, and it is doubtful if the elongation spoken of in the books as the result of intra-capsular effusion ever *really* exists. One point should be especially noted here, namely, the *reported fall* of the child about the time the disturbance of its health was first noticed. Dr. G. said that in a majority of the cases he had seen, some such testimony would be elicited, provided the attention of the friends was *called to it*, and there was no doubt in his mind that in a very great proportion of these cases the disease was local in its origin. The idea generally entertained was, that coxalgia was, merely the local expression of a constitutional fault, which was generally a tubercular diathesis. It is true that these inflammations are most likely to occur in scrofulous subjects, in whom a very slight local injury may awaken serious organic changes; and it is true that inflammation established in the joint of such a person will, uncontrolled, give rise to exudations more or less nearly allied to tubercle; but without arguing the question at length, one single fact was almost sufficient to settle it, and that was, that if by any means the pressure and friction between the opposing surfaces were removed, both local and constitutional symptoms were relieved; and, if taken early, the *great majority* of patients would recover without *any other treatment*.

This, then, was the great indication in this case. Apply a Sayre's splint, making sufficient extension to separate the head of the bone from the acetabular surface. There is not sufficient contraction of the muscles to prevent this; if so, we should tenotomize them. She will then be free from pain, will sleep quietly, and as soon as she is accustomed to the instrument will walk and run with ease, inasmuch as the weight of the body is now upon the peroneum. She is to have also syrup of iodide of iron, a good, nourishing diet, and to be kept as much as possible in the open air.

The splint was applied, and in six weeks the child came walking easily into the clinical room, looking rosy, and complaining of no pain. Six months later, the splint was discontinued, she having perfectly recovered.

**CASE II.—Encysted Tumor.**—John G. has a swelling just over the parotid gland. The fact that the tumor is movable, circumscribed, painless, fluctuating, and has been three years growing, and that the general health is impaired, is sufficient to warrant the diagnosis of simple encysted tumor.

A simple incision was made down to the sac, which was enucleated without difficulty. Wound healed by first intention.

**CASE III.—Carcinoma Uteri.**—A. S., aged fifty-five, unmarried. Had one child when sixteen years old; none since. Has had repeated attacks of pneumonia and pleurisy within fifteen years, to relieve the effects of which, as she says, she has worn a seton in the chest for ten years constantly. Says she had "ulceration of the womb" five years ago, which was cured by local treatment. A year ago, began to suffer pain through the pelvis, which has come to be very severe, often of a lancinating character. It is aggravated in urinating. Occasionally a slight bloody discharge. General health fair. An aunt and two sisters died of cancer. Professor Green said, we might have here either an inflamed or displaced uterus, or some morbid growth involving the neck or the body of the organ. If benign, the *probabilities* in this case would be that it was a submucous, fibrous tumor, but the history of the case pointed strongly to cancer. We were not, however, to make a diagnosis until we had made a *thorough* exploration of the parts. The same rule should guide us as in examining other parts of the body, *to-wit: possess yourself of all available evidence*. Without this critical examination and thorough analysis of his case, no man can be an *accurate and reliable* diagnostician or therapist in surgical diseases of women.

The patient was taken to the ante-room and examined. Sound passed into the uterus, which measured three and a half inches; the anterior lip nodular and of stony hardness, and whole anterior wall of cervix blended with posterior wall of bladder. Thus the case is clear as one of carcinomatous uterus.

**Treatment.**—Live well; take tinct. ferri muriatis, twenty drops, after each meal; two grains of codium at night to relieve pain, and continue to wear the seton. The discharge from it is to a certain extent eliminative, and may have quite an influence in retarding the progress of the malignant disease.

(TO BE CONTINUED.)

*Ozone.*—The following are the reliable facts known up to this time respecting ozone: 1. Ozone in a natural state is always present in the air in minute proportions, viz: one in ten thousand. 2. It is destroyed in large towns, and with special rapidity in crowded, close, and filthy localities. 3. Ozone gives to oxygen properties which enable it to support life. In this respect it acts like heat; its effects are destroyed by great heat. 4. Ozone diffused through air in minute quantities produces, on inhalation, distinct symptoms of acute catarrh. 5. When animals are subjected to ozone in large quantities, the symptoms produced, at a temperature of 75°, are those of inflammation of the throat and mucous membranes generally, and at last congestive bronchitis, which, in carnivorous animals, is often rapidly fatal. 6. When animals are subjected for a long period to ozone in small proportions, the agent acts differently, according to the animal. The carnivora die, after some hours, from disorganization of the blood, but the herbivora will live for weeks, and will suffer from no acute disease. 7. The question whether the presence of ozone in the air can produce actual disease, must be answered cautiously. Science has yet no actual *demonstrative* evidence on the point. But the facts approach to demonstration that catarrh is induced by this agent. 8. During periods of intense heat of weather ozone loses its active power. 9. On dead organic matter undergoing putrefaction, ozone acts rapidly; it entirely deodorizes by breaking up the ammoniacal products of decomposition. At the same time it hastens the organic destruction. 10. There is an opposite condition of the air by which the oxygen is rendered negative in action, as compared with the air when it is charged with ozone. Air can thus be rendered negative by merely subjecting it, over and over again, to animals for respiration. The purification of such air from carbonic acid and other tangible impurities, does not render it capable of supporting healthy life; but ozone restores the power. In a negative condition of air, the purification of the organic matter is greatly modified, and the offensive products are increased. Wounds become unhealthy and heal slowly in such negative air. 11. There is no demonstrative evidence, as yet, that any diseases are actually caused by this negative condition of air; but the inference is fair, that diseases which show a putrefactive tendency, are influenced injuriously by a negative condition of the oxygen of the air. It is also probable that during this state, decomposing organic poisonous matters become more injurious. 12. As ozone is used up in crowded localities, and it is essential that ozone should be constantly supplied, in order to sustain the

removal of decomposing substances and their products, no more attention to ventilation and other mechanical measures of a sanitary kind can be fully effective, unless the air introduced be made active by ozone. Fever hospitals and other large buildings in towns should be artificially fed with ozonized air.---*Brit. Medical Journal.*

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*Foreign Intelligence.*---The School of Medicine founded by Maximilian, in Hapsburg, Mexico, has been attended by 200 students, but as seven years are required to complete their studies, it is doubtful if any of them graduate under his imperial patronage.

Prof. Romberg, of Berlin, lately received the congratulation of his colleagues through a deputation composed of Prof. Grafe, Griesinger, Langenbeck, Traube and Virchow, on the celebration of his 70th birthday.

At the suggestion of Prof. Rokitansky a committee, consisting of Profs. Wedl, Roll and Klob, has been appointed by the Imperial Society of Physicians in Vienna to study and report upon Trichiniasis. Of the 350 persons affected during the late epidemic at Hedersleben, more than 90 have died. The village contained but 1800 inhabitants.---*Boston Medical and Surgical Journal.*

## EDITORIAL AND MISCELLANEOUS.

## MEDICAL EDUCATION.

No subject connected with the Profession of Medicine has engaged the attention of physicians more, for several years prior to the late war, than that which heads this article. Since the war is over, and the din of battle has subsided, this war of words amongst medical journalists, professors of colleges and physicians generally, is being reinaugurated.

A somewhat extended article on this subject appears in the editorial department of the *Richmond Medical Journal* for March. From the earnest and spirited manner in which the editor leads off, we were flattered with the hope that some certain and practical plan to insure more thorough and perfect medical education, was about to be suggested; but after perusing the article carefully, we must say, that, while we are pleased with the object in view, and the zeal with which its accomplishment is sought, we find no suggestion for carrying into effect the proposed change, which will probably lead to more practical results than those mentioned heretofore.

All must desire to see students of medicine well educated in the science before they are authorized to assume the responsibilities of the profession, and the fact that the standard of requirements for the degree, in many of the medical colleges, is too low, is felt and deplored by all true lovers of medical science; and yet such wholesale censure as the *Richmond Journal* indulges toward teachers and institutions not Trans-Atlantic, we think will not meet with favorable response from the profession generally. Many of us claim our *Alma Mater* this side the water, and are proud of the advancement made in the medical sciences by men whose success is

due to teachings in American Colleges. The means by which to insure efficiency in those assuming the duties of the physician, is a problem, for the solution of which, certain members of the profession have been engaged for years. Lengthening the term of study; increasing the number of courses to be taken; adding to the usual number of chairs; confining the courses to winter months; increasing the length of the interval between the courses, &c., &c., have, in turn, been mentioned as the means through which the desired improvement must come. A practical and feasible plan is hinted at in the article above alluded to—one which was advocated years ago by the *Atlanta Medical and Surgical Journal*—and we think strikes at the root of any short coming that colleges may be inclined to indulge. If, through self-interest, sympathy, or any other cause, colleges allow ignorant men to graduate in medicine, a board of eminent and honorable members of the profession may be organized, unconnected with teaching and not liable to the prejudices of selfish influences, so much complained of as the sources of this crying evil. If a bona fide effort to raise the standard of requirements for graduation be intended, let the independent board be organized in every State, whose especial and only duty it shall be to decide upon the qualification of applicants for the degree; then, and not until then, will there be a higher standard uniformly observed. If, as is said, selfish interests direct faculties in their demands upon students, under the present system, we suggest, that instead of thus securing patronage by the ease with which the degree is obtained, let the thorough preparation and certainty of success of the applicants furnished the independent board, be made the means of accomplishing those ends. Then will colleges become directly and pecuniarily interested in adopting the best system of instruction.

The laity of the profession may unite, as suggested by the *Richmond Medical Journal*, in a demand upon the colleges to furnish better educated physicians, and the penalty—that of withholding patronage on failure to comply—may be thrust before their eyes at every corner of the street, and yet the desideratum is not attained. Each college claims that its alumni are equal to those of any other; and how is the proof controverting it to be

produced and the verdict rendered? "What is everybody's business, is nobody's business;" and this community of physicians is not likely to inaugurate any systematic plan of ferreting out delinquents. Nor will the united sentiment of the colleges on any of the propositions, touching the time of study required, intervals between the courses, number of teachers engaged, or the season of the year in which the session is held, affect at all the status of the graduate. Indeed, the greater the requirements and the more stringent the exactions for admission to examination, the less so will they be in the qualification for the Degree.

The length of time occupied in preparing for the medical profession does not guarantee thoroughness of preparation to all. Some in every medical class are thoroughly prepared to commence, on their own responsibility, the practical study of medicine—at the bedside after the usual course of study; while others are not, nor would they be in double the time, should the terrorum of stringent exactions in the greenroom be withheld. Time alone cannot be depended on to insure competency, nor can long intervals between the courses of didactic study add to the probability of thorough preparation; but on the contrary, much is generally lost to the student, in the relaxation from study, and the recreation and pleasures generally indulged during the intervals.

This being the case—and we presume none will deny the truth of the statement—the shorter the interval the more thoroughly and perfectly will the student be educated in any given time. We have no reason to doubt the sincerity and good intentions of those, from whom the various plans have emanated, and many of the advocates doubtless have the honor and usefulness of the profession at heart. Then why may not all agree upon some particular arrangement by which the whole question may be disposed of in a manner satisfactory to the colleges, honorable to the profession, and beneficial to mankind? This everlasting quarrel among the colleges about the manner of teaching, the time of teaching, &c., can never effect one inch of movement in the desired direction. Let all agree to have a board as a general tribunal, with a member from each State having a medical college in it; or a board for each State—as above suggested—made of eminent resident physicians, unconnected

with medical schools, whose duty it will be to pass upon the qualifications of all students presented by the colleges for the degree of Doctor of Medicine. The respectability, honor and pecuniary interest of the schools will, in this way, be placed in jeopardy by any failure to adopt the best mode of teaching to insure, in their pupils, the highest standard of qualification. That institution to which has been returned the largest number unfit to enter the profession, will, in self defense, seek to improve its system of instructions, and labor more assiduously to sustain a position which will warrant students in patronizing it with safety to their own interest.

These are the views we entertain of the principle by which these vexed questions may be settled, and without the adoption of some such mode, we predict incessant wrangling among teachers for all time to come, unless staid by the millennial reign.

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*Atlanta—Returning Prosperity.*—Since peace has returned to our land, Atlanta, though by the ravages of war, almost utterly demolished, has, from the industrial energy of her people, attained, in some particulars, to her former importance and magnitude; and at the same rate of improvement which has been going on for twelve months past, business of every character will be greatly ahead of ante-war-times one year hence. While other departments of business are being pushed forward, medical matters are not neglected. Medical teaching has been re-established, and the prospects of Atlanta Medical College are far better for the ensuing Regular Summer Session, than the most sanguine could reasonably have anticipated, with the ruined condition of the country, and with the dilapidated condition of the college building, apparatus, &c. The improvements to the building, and the addition to the appliances necessary for instruction in the several departments of the Institution, are being made, and by the opening of the course in May, all will be complete as heretofore.

The Medical Profession of the city, as heretofore, have their regular Society meetings weekly, in which their Reports, discussions, consultations and weekly re-unions tend to cement the body



medical and enhance their usefulness, individually, in the practice of their profession.

Druggists have accumulated—Phoenix-like, from the ashes of three or four drug houses seven or eight have risen. Some five or six establishments, as will be seen from our advertising pages, are in successful operation here. Taking into consideration the short time devoted to the preparation for business, it is a matter of astonishment that such general assortments and heavy stocks should be offered.

To physicians, druggists and builders finding it to their interest and convenience to make their purchases in Atlanta, we would say, their every want can be supplied. If, however, it is desirable to make purchases farther West, advertisements will be found in this Journal offering inducements to the trade.

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*Nitrous Oxide Gas as an Anæsthetic.*<sup>4</sup>—In the *Medical and Surgical Reporter*, Dr. J. W. Carnochan, Surgeon-in-Chief to the State Emigrant's Hospital, New York, reports three surgical operations which he performed, using the nitrous oxide gas as the anæsthetic. The first operation was for the removal of the entire breast and glands of the axilla for cancer. The patient, a lady in feeble health, was kept in a profound anæsthetic sleep for sixteen consecutive minutes. No nausea or vomiting followed the administration.

The second was an amputation of the leg. The patient, an adult extremely debilitated, was kept under the influence of the anæsthetic for two minutes and a quarter. No nausea or any unpleasant symptoms followed. The third, an amputation of the leg in a boy thirteen years of age; the whole time consumed in the inhalation, operation, and recovery from the anæsthetic sleep was only two minutes. No unpleasant symptoms followed. After the report of these cases—a synopsis of which we have given above—Dr. Carnochan, in discussing the advantages of this agent, says:

“For minor operations, or for capital operations, such as amputations which, when properly performed, should require but a few

minutes, I have no hesitation in stating that the nitrous oxide gas, as an anæsthetic is far superior to either chloroform or ether. Insensibility is suddenly produced, and the patient recovers consciousness quickly, the operation being attended by no nausea or sickness, and without the dangerous effects often incident to chloroform and ether.

"It is worthy of remark that the nitrous oxide gas approximates in its chemical combination to the composition of the ordinary atmosphere, and we may thus, inferentially, account for its favorable influence. Whether it can be used in operations which, from their nature, require from half an hour to an hour's time, remains still to be proved by actual experiment."

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*"Intra-Uterine Variola.*—M. Legros presented to the Biological Society of Paris a variolous foetus, with the following history:—On May 18th, a woman in the Hotel Dieu was prematurely delivered of a foetus aged apparently about five months, which was covered with pustules or small-pox. The mother had distinct marks of vaccination, and had never had small-pox. About six months previously, she had had connection with a man who was convalescent from variola. No exposure of the mother to contagion could be traced. This case, Mr. Legros observed, raised the question whether the father could have communicated the small-pox at the moment of fecundation, the disease remaining for five months in a state of latency. This theory he believes to be supported by the facts that, when a pregnant woman has small-pox, the foetus is sometimes not attacked till some time after the recovery of the mother; and that, in a child of a syphilitic father, the disease in some cases does not show itself in the infant until several days or even weeks after birth."

The above case is copied from the *Buffalo Medical and Surgical Journal*, as taken from *Gazette Medical de Paris*, August 5, 1865.

A case, in some respects similar to this, was reported to the Atlanta Medical Society, in February last, by Dr. H. L. Wilson. He stated that a few days before, he was called to see a lady in labor, and soon after his arrival she was delivered of a dead foetus, apparently about the eighth month, which was covered with the characteristic small-pox pustule. At the time of delivery he was at a loss to account for the disease in the foetus, as the mother disclaimed having had any variolous affection. At a subsequent visit,

however, a more thorough investigation convinced him that the mother had had a light attack of varioloid a few weeks previous to her premature delivery.

Is it not probable that in M. Legros' case a light attack of varioloid had passed unnoticed by the mother?

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*The Superiority of Kosso as a Remedy for the Tape Worm.*—From the *Buffalo Medical and Surgical Journal* we make the following extract from the proceedings of the Buffalo Medical Association:

"Dr. C. L. Dayton presented two specimens of tape worm, and believed that the head had in both cases been expelled with the body, but had not made a microscopic examination. The first patient was a man of middle age, and the second a young lady of eighteen. Gave  $\frac{3}{4}$  i of kosso in 3 i doses every four hours in each case.

Dr. Cronyn remarked that the case related by Dr. Dayton brought to mind the superior value of the kosso. Had lately given it to a patient who had taken other remedies in vain. The patient soon passed thirty feet of tape worm, and a few days after resort was again had to the remedy, with the result of the passage of about one hundred feet.

Dr. Dayton finds that kosso often causes vomiting unless preceded by a cathartic, the operation of which will almost invariably prevent vomiting.

Dr. Miner thinks that kosso is usually given in too large doses, and believes that half the usual quantity is sufficient."

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*Trichiniasis.*—This parasitic invasion of the human body is giving some uneasiness to the people of the North West, in various parts of the country. *Trichina-Spiralis* is the name given a parasite which penetrates the soft tissues of the body, particularly the voluntary muscles, and when introduced, gives rise to a train of symptoms most distressing and dangerous. The name which heads this article denotes that disease or condition produced by the ravages of the entozoa. Their introduction, it is supposed, occurs by the

use of the flesh of animals as food, in which the trichinæ exist; passing into the bowels, they make their way into the muscles.

The following case is taken from the *Detroit Medical Review*, as reported for that journal by Herman Keifer, of Detroit Michigan :

"On the second of January last, I was called to see Mrs. M., a young woman of twenty-one years of age, who had been in this country about four months, having left Germany in June of last year. I found her in bed, having been ill for a week, unable to move herself in any way, from severe pain and soreness in all the muscles of her body. Pain in the throat almost wholly prevented swallowing, and opening the mouth sufficiently to show the tongue. Examination of her mouth and throat showed the tongue moist, a little coated; the uluva and tonsils natural. She had no appetite, but intense thirst, some nausea, bowels constipated; no particular pain in any part of the abdomen, and no tympanitis; sounds of heart and lungs normal, pulse 102, skin moist, perspiring easily; kidneys acting freely, the urine acid, pale yellow, containing no albumen, and without sediment; secretion of milk (she was nursing a child ten weeks old) diminished, no menses; mind undisturbed, but unable to sleep at all. Extreme sensitiveness prevailed in all parts of her body, to such a degree that simply holding her hand to examine the pulse caused intense pain. The case lingered as above for three weeks, without any material change, except increasing weakness, pulse more frequent, rising to 120 per minute, pains, thirst and sleeplessness more distressing. After sixteen days anasarca and profuse diaphoresis appeared; the œdema more marked in the lower extremities and constantly increasing. Diarrhoea set in, and an eruption of small red pimples (like that of variola on the second day of its appearance) spreading over the thorax, and she sank rapidly. On the 19th her mind became disturbed, and on the 21st day after my first visit she died.

As to the diagnosis of the case during the life of the patient, I confess I was somewhat puzzled during the first week I saw her. My first idea that it was an acute muscular rheumatism, soon had to be abandoned, as also the next one, that it was typhoid fever, by the absence of the most important symptoms due to the diseases. In thinking over the matter again and again, I remembered a description of a case of Trichiniasis by Professor Friedrich, of Heidelberg, published in Lath's Medical Almanac for 1864. By a careful perusal of the case, I found such a coincidence of symptoms in my own, that I had from the moment not a doubt that the case was one of trichiniasis. Particularly striking were the pains

in the throat, (by emigration of the trichina into the muscles of the pharynx) the intense thirst, the profuse sweating and anasarca, the restlessness and muscular sensitiveness. A microscopic examination of portions of the muscles of the abdomen and leg showed the presence of *trichina spiralis*. The portion from the abdomen was literally swarming with them, but in the leg they were more scattered.

As this disease is causing great alarm in Germany during the last few years, and as already several cases are reported as occurring in this country, (within a few weeks one died in Chataque Co., N. Y., under the care Dr. Krompein, and one or two are reported from Marietta Co., O., by Dr. Dingler,) there seems no reason why the disease should not spread to some extent here.

In the next number of the Review I shall present a synopsis of all that has come to my knowledge in regard to the *trichina*, with drawings from nature of the parasite in its various stages of development.

This case is reported in the hope that my experience may lead my brothers of the medical profession to keep a sharp lookout for this new enemy of the human race."



*"Successful Removal of the Uterus and both Ovaries, by abdominal section, the Tumor Fibro-cystic, weighing thirty-seven pounds.—*  
By Horatio Robinson Storer, M. D., of Boston, Assistant in Obstetrics," &c., &c.

We are in receipt of a pamphlet of 32 pages, bearing the above title. From the statistical researches of Dr. Storer it appears that his is the sixth successful extirpation of the uterus by abdominal section, upon record. Out of twenty-four operations of the kind published, eighteen proved fatal, leaving the "per centage of recoveries 1 in 4, or 25 per cent."

Though, at first view, the work savors somewhat of egotism, yet we freely and willingly pass by the slight foibles of eminent brethren in the profession whose lives are spent in ameliorating the condition of suffering humanity.

The operation detailed in the work is one of importance, and he who relieves the poor sufferer from the burthen life carries with it, by such timely successful operation, deserves to be called a benefactor and philanthropist.

*Medical Association of Georgia.*—The last meeting held by this body was in Atlanta, on the second Wednesday in April, 1861. At that time the next annual meeting was appointed for the second Wednesday in April, 1862, in the city of Columbus. Dr. John T. Banks was elected President, Dr. A. G. Thomas, Secretary, Dr. J. F. Alexander, 1st Vice President, and Dr. V. H. Taliaferro, 2d Vice President.

We learn that no meeting has been held since 1861, and therefore, the gentlemen above mentioned are the officers of the Association now.

We think the interest of the profession requires that a meeting be held as early as practicable, and in order to this, we suggest that, it is the duty of the last elected President to appoint a meeting at the last place selected by the body, if agreeable to members of the profession there.

We do not feel content to let another year pass without renewing those pleasant associations, that in years past have proved so agreeable and profitable.

There is no doubt that by postponing the meeting a month beyond the usual time, say, to about the 15th of May, a respectable attendance could be had in Columbus, or any other place, that may be agreed upon.

While it is true that the destructive war through which we have passed, leaves physicians illy able to devote time or money to any other object than the immediate support of themselves and families, yet from the interest manifested by several physicians of our acquaintance, we feel warranted in the opinion, that the attendance will not be less than at some former meetings, in more prosperous times.

At the last meeting, Drs. O'Keefe, Taliaferro and Boyd were appointed a committee to raise \$100, to be distributed for the best Essays, in the amounts of \$50, \$30 and \$20. Drs. Coe, Means, Alexander, H. W. Brown and T. C. H. Wilson, were appointed to examine Essays.

We learn from the Chairman that the \$100 for premiums will be raised.

*American Medical Association.*—The Seventeenth Annual Session of this Association will be held in the city of Baltimore, May 1st, 1866. The following Committees were appointed to report at that time :

On Prize Essays, Dr. Austin Flint, Sr., New York, Chairman.  
On Quarantine, Dr. Wilson Jewell, Pa., Chairman.  
On so-called Spotted Fever, Dr. Jas. J. Levick, Pa., Chairman.  
On Ligature of the Subclavian Artery, Dr. William Parker, N. Y., Chairman.

On Tracheotomy in Membranous Croup, Dr. Alex. N. Dougherty, N. J., Chairman.

On Rank of Medical Corps in the Army, Dr. C. S. Tripler, U. S. A., Chairman.

On Rank of Medical Corps in the Navy, Dr. T. L. Smith, N. Y., Chairman.

On Medical Literature, Dr. C. A. Lee, N. Y., Chairman.

On Medical Education, Dr. Samuel D. Gross, Pa., Chairman.

On American Necrology, Dr. C. C. Cox, Md., Chairman.

On Patent Rights and Medical Men, Dr. David Prince, Illinois, Chairman.

On Alcohol and its Relations to Man, Dr. Gerard E. Morgan, Md., Chairman.

On Insanity, Dr. Alfred Hitchcock, Mass., Chairman.

On Milk Sickness, Dr. Robert Thompson, Ohio, Chairman.

On the relation which the Doctrine of the Correlation and Conservation of Forces bears to the Physiological and Pathological Condition of the Human System, Dr. S. L. Loomis, D. C., Chairman.

On the Progress of Medical Science, Dr. Jerome Candee Smith, N. Y., Chairman.

On Diphtheria, Dr. H. D. Holton, Vt., Chairman.

On the Comparative Value of Life in City and Country, Dr. Edw. Jarvis, Mass., Chairman.

On Drainage and Sewerage of Cities in their Influence on Health, Dr. Wilson Jewell, Pa., Chairman.

What Effects has Civilization on the Duration of Human Life, Dr. Augustus A. Gould, Mass., Chairman.

On Disinfectants, Dr. E. M. Hunt, N. J. Chairman.

On Compulsory Vaccination, Dr. A. Nelson Bell, N. Y., Chairman.

On Strangulated Hernia, Dr. W. F. Peck, Iowa, Chairman.

On the Causes and Pathology of Pyæmia, Dr. J. J. Woodward, U. S. A., Chairman.

On the Use of Plaster Paris in Surgery, Dr. Jas. L. Little, N. Y., Chairman.

On the Etiological and Pathological Relations of Epidemic Erysipelas, Spotted Fever, Diphtheria, and Scarlatina, Dr. N. S. Davis, Ill., Chairman.

On Meteorology, Medical Topography, and Epidemics:

Dr. J. C. Weston, Me.

Dr. D. Francis Condie, Pa.

" P. A. Stackpole, N. H.

" T. Antisell, D. C.

" C. L. Allen, Vt.

" O. S. Mahon, Md.

" A. C. Garratt, Mass.

" T. M. Logan, Cal.

" C. W. Parsons, R. I.

" R. C. Hamill, Ill.

" B. H. Catlin, Conn.

" J. W. H. Baker, Iowa.

" E. M. Chapman, N. Y.

" Abm. Sager, Mich.

" E. M. Hunt, N. J.

" J. W. Russell, Ohio.

WILLIAM B. ATKINSON,  
*Permanent Secretary, Philadelphia.*

*Palmer Arm and Leg—Manufactured under the direction of the Inventor and patentee, B. Frank Palmer, L. L. D., President of the American Art. Limb Company.*

We are in receipt of a pamphlet of 48 pages from the above company, most of which is occupied with the testimony of surgeons, generals, soldiers and private citizens, in favor of the productions of this manufactory. Soldiers of the United States army are furnished with artificial limbs from this and other manufactories, at government expense.

Soldiers of the Southern army, being left out of this programme, must needs go on crutches, if unable to buy, until the States adopt some plan by which they can be furnished. The Georgia Legislature, we find, has appropriated money for this purpose, and we hope arrangements will be made soon, that will make artificial limbs available to our maimed soldiers. We have not yet had an opportunity of inspecting the Palmer limb, but from the array of testimonials in the publication before us, it is, undoubtedly, all that could be desired.



*Valuable Medical Works.*—We are in receipt of Lindsay & Blakiston's Catalogue of Medical and scientific publications, Philadelphia. In looking through the catalogue, we find the "Epitome of Braithwait's Retrospect—the cream of forty volumes of the Retrospect up to 1860"—in two large octavo volumes of 900 pages each, by Walter S. Wells, M. D.—Price \$10.00.

Before the war it was our good fortune to become possessed of the "Epitome" in six volumes of about 300 pages each, and found it almost a library of medicine and surgery in itself. We cannot too highly recommend it to the shelves of every physician's office.

We find in the catalogue an extensive list of standard medical works.

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*Journals Received.*—*Savannah Journal of Medicine*—new series, edited by Drs. Juriah Harris, James B. Read and J. G. Thomas, a monthly of 68 pages. Published in Savannah, Georgia.

*Richmond Medical Journal*, a monthly of 78 pages, edited by E. S. Gailliard, M. D., and W. S. McChesney, M. D., Richmond, Virginia. The *Boston Medical and Surgical Journal*, a weekly of 20 pages, edited by Samuel L. Abbot, M. D., and James C. White, M. D., Boston, Massachusetts. The *New York Medical Journal*, a monthly record of medicine and the collateral sciences. The *Chicago Medical Examiner*, a monthly of 64 pages, edited by N. S. Davis, M. D., Chicago, Ill. The *Cincinnati Lancet and Observer*, a monthly of 68 pages, edited by Edward B. Stevens, M. D., and John A. Murphy, M. D., Cincinnati, Ohio. *Buffalo Medical and Surgical Journal*, a monthly of 56 pages, edited by Julius F. Miner, M. D., Buffalo, N. Y. The *Detroit Review of Medicine and Pharmacy*, editors, George P. Anderson, M. D., Samuel P. Duffield, Ph. D., and Edward W. Jenks, M. D., Detroit, Mich. The *Medical and Surgical Reporter*, a weekly journal of 26 pages, S. W. Butler, M. D., editor, Philadelphia. The *Cincinnati Journal of Medicine*, Geo. C. Blackman, M. D., T. Parvin, M. D., and B. Bartholow, M. D., editors. The *Medical and Surgical Monthly*, Memphis, Tennessee, Frank Ramsey, M. D. editor.

*List of Payments.*—Drs. G. T. Pursley, \$5; F. M. Brantly, \$4; John T. Dixon, \$4 86; J. J. Knett, \$2; Smith & Edwards, \$4; Turner, \$4; J. G. W. Brown, \$4; N. F. Howard, \$4; C. L. Redwine, \$4; D. H. Conally, \$4; Taylor & Ball, \$4; G. G. Crawford, \$4; J. M. Johnson, \$4; J. L. Westbrook, \$4; G. B. Douglas, \$4; D. C. O'Keefe, \$4; W. P. Harden, \$4; E. J. Roach, \$4; T. S. Powell, \$4; Alexander & Orme, \$4; W. B. Wells, \$4; J. P. Hervey, \$4; J. J. Cooper, \$4; Wm. H. Pilcher, \$4; F. M. Thomason, \$2; Connally & Cromell, \$4; Taliaferro, \$4; Davis & Fitts, \$4.

### PROSPECTUS OF THE

## Atlanta Medical and Surgical Journal.

After an absence of four years, the ATLANTA MEDICAL AND SURGICAL JOURNAL made its appearance again on the first of March, 1866. We hope our old patrons will not only send on their *names* and *subscription fee*, but make the JOURNAL the medium of communicating such views as may be of interest to the profession. At no period since our connection with journalism has a medical periodical been so necessary as at the present time. The four years of active duty, to a large extent in military practice, without any communication with each other through the press, afford physicians rich stores of valuable information for the profession generally.

Our object in the conduct of the JOURNAL, will be mainly to promote advancement in the medical sciences, but we will fearlessly, honorably, and independently advocate such principles in Ethics, and other subjects connected with the body *medical*, as will be most conducive to the harmony of the profession and the cause of humanity.

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J. G. WESTMORELAND, M. D.,  
W. F. WESTMORELAND, M. D., } Editors and Proprietors.

Atlanta, Georgia, April 10, 1866.

# ATLANTA MEDICAL COLLEGE.

The Eighth Regular Summer Course of Lectures in this Institution will commence, as heretofore, on the first Monday in May next and continue for four months; at the close of which a public Commencement will be held for conferring the Degree of Doctor of Medicine.

## FACULTY:

JOHN W. JONES, M. D., Emeritus Professor of Practice of Medicine;  
J. P. LOGAN, M. D., Professor of Theory and Practice of Medicine;  
A. MEANS, M. D., Professor of Chemistry and Pharmacy;  
D. C. O'KEEFE, M. D., Professor of Anatomy;  
T. S. POWELL, M. D., Professor of Obstetrics and Diseases of Women and Children;  
EBEN HILLYER, M. D., Professor of Physiology;  
W. F. WESTMORELAND, M. D., Professor of Surgery;  
S. H. STOUT, M. D., Professor of Surgical and Pathological Anatomy;  
J. G. WESTMORELAND, M. D., Professor of Materia Medica and Therapeutics.

Practical Demonstrations in Anatomy will be under the immediate supervision of the Professor of Anatomy.

After four years respite from the exercises of the College, in which the Apparatus, Models, Library, &c., as well as the building itself, have been somewhat mutilated, most of the original members of the Faculty having passed safely through the dangers and hardships of war, returned to the duties of the Institution in November last, and have now nearly completed the labors of the Winter Session. Preparatory to this session, in part, the necessary repairs of the building and the purchase of chemicals and implements have been made. A complete outfit in all the appliances necessary for a thorough course of instruction, will be procured before the opening of the session in May, so that the study of Anatomy by models, plates, &c. and by Dissections and Demonstrations, on an abundance of sound material, can be prosecuted in the most advantageous manner.

The facilities afforded by the Institution, in practical or clinical Medicine and Surgery, are equal to those of any College in this country. The Faculty have constant and unrestrained access to the Freedman's Hospital, situated as conveniently as could be desired, in which is found a variety of surgical cases, and ordinary diseases of the country. In short, all that is necessary to give the student a thorough Medical education will be afforded.

The high standard of qualification heretofore required in granting the Degree, will be rigidly observed.

## REQUISITES FOR GRADUATION.

In order that he may be admitted to examination for the Degree of Doctor of Medicine, the student must be twenty-one years old, and of good moral character. He must have been engaged in the study of Medicine, under the direction of a competent instructor, at least one year, exclusive of his Collegiate Course. Two full courses of Lectures in this Institution, or one in this and one in some other respectable Medical College, are necessary, the last of which must be in this Institution.

An original Thesis, on some Medical subject, in the handwriting of the student, must be presented to the Dean one month before the close of the session.

## FEES FOR THE COURSE.

Matriculation, (taken once only),	\$ 5 00
Course of Lectures,	105 00
Demonstrator's Ticket, (required only once),	10 00
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For further information, address J. G. WESTMORELAND, Dean.  
Atlanta, Georgia, February 20, 1886.

ATLANTA  
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NEW SERIES.

VOL. VII.

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No. 3.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

*Cases Reported for the Atlanta Medical & Surgical Journal.*—  
By DR. J. T. BANKS.

CASE No 1.—John Davis, a powerful, but dissipated soldier of the C. S. A., and permanently lame from injuries in the late war, received several wounds by a pointed dagger, between three and four o'clock, on the morning of December 6th, 1865, while on a drinking spree, in an eating saloon of this city. I was called to see him about five o'clock, and found him removed about three-fourths of a mile, to which place he had been carried in a buggy. On examination, I found three punctured wounds, made by a pointed dagger with sharp edges, but only *one* of a serious character, which was a penetrating wound, in the left side, about midway between the crest of ilium and the floating ribs. It was about three-fourths of an inch in extent, and opened directly towards the centre of the abdominal cavity. On inquiring, I learned that Dr. ——— had seen and examined the wound, and gave it as his opinion that it did not penetrate the cavity; but from the amount of collapse, little loss of blood, and severe pain complained of, and located in the umbilical region, I was satisfied

that the dagger had been plunged deep into the cavity, but could not diagnose any special injury within. His pulse was extremely feeble—at times imperceptible. I dressed his wounds with cold water dressing, and applied the same over abdomen. Gave him one gr. of sulp. morphia in  $\frac{3}{4}$  of whisky, and left two more gr. doses to be given every three or four hours until the severe pain subsided; also ordered perfect quiet, with the cautious use of stimulants until re-action was established. December 5.—Condition no better. Re-action imperfect; partial coma, supposed to be the result of doubling the amount of morphia prescribed, but when aroused, complained of the same pain. Bowels distended since first visit; passed urine; pulse extremely feeble; prescribed warm brandy toddy, and constant application of cold water over abdomen.

He continued to sink, and died at four o'clock next morning.

Post mortem examination, thirty hours after death, assisted by Dr. N. B. Drewry.

Only one wound penetrated any cavity of body. On opening abdominal cavity, we found a very large amount of dark, semi-coagulated blood, filling up every space among the convolutions of small intestines on left side. To find the source of so much hemorrhage, we carefully removed about two large washpansful of this dark, semi-coagulated blood, when I carefully traced the rout of dagger beneath the descending colon, just above the sigmoid flexure, and beneath the small intestines, to the *abdominal aorta*, which I found punctured about two inches above its bifurcation, the puncture being about one-fourth of an inch in extent. His death was caused by hemorrhage from this puncture.

The professional interest in this case, is the length of time he lived after such a puncture of the aorta; and the vast amount of internal hemorrhage, which could not have been less than 150 oz.; teaching how low the amount of the circulating mass may be reduced without inducing syncope, when the recumbent posture is maintained, and the blood drawn off in a small stream.

It is to be regretted that a correct diagnosis could not be made soon after the reception of the wound, thereby losing a favorable opportunity of ligating the abdominal aorta in a healthy subject.

CASE No. 2.—In connection with Dr. M. J. Daniel, on the

morning of ———, 1865, I was called to see Colonel R., who had been severely injured in a railroad accident the over night. On my arrival I found him in the care of Dr. Smith, of Athens, who was on the train at the time of the accident, and had applied such temporary dressing as the case demanded, while kindly remaining with him (eight or ten hours) until other medical aid could be obtained.

We found him in a state of extreme collapse. Skin cold and bathed in a profuse perspiration; pulse rapid, feeble, and often imperceptible; not much complaint of pain in quietude, but extreme nausea and vomiting. On examination, I found a compound fracture of left leg, both bones broken in upper part of *middle third*. Also, a fracture of thigh at juncture of lower and middle third, with all the intermediate soft parts very much contused—so much so around the knee-joint, that a correct and satisfactory diagnosis of its condition could not be made out, until several days after, when I punctured a large fluctuating tumor, on the inside of the knee, and discharged five or six oz. of dark, thin, disorganized blood, after which I had no difficulty in deciding upon the non-implication of the knee-joint in the injury. The amount of contusion and effusion around the joint, with distinct fluctuation, led to the belief that a serious lesion of the joint existed, and that the fluid, giving the feeling of fluctuation, was in the synovial sac. Fortunately, the joint escaped injury, and the fluctuation was caused by hemorrhage into the surrounding cellular tissue. There were two wounds of the leg communicating with the fracture, one anterior with the tibia, and the other posterior and lower down, with the fibula. In addition to these there was a dislocation of the right sacro-iliac symphysis, caused by a severe blow on the tuberosity of ischium, driving the ilium upwards and backwards half an inch or more. The same blow inflicted some injury on urethra. He had several contusions over other parts of the body, but of little consequence. His condition was esteemed critical; life was threatened with extinction every hour; nine hours had passed, not only without any indication of re-action, but with a marked decline of vital energy in last hour; a death-like paleness covered his features; he was bathed in dissolution's clammy

damp, with only caloric enough left to prevent the congelation of the fountain of life. Under the circumstances, we determined to make him as comfortable as possible without any mechanical appliances, and address our treatment to his restoration, believing that his chances for recovery were not more than five in a hundred. We prescribed morphia, hot brandy and whisky punches, hot coffee, highly seasoned soups, camphor juleps, with carb. ammonia; dry heat to feet and legs; mustard over stomach, &c., for twenty-four hours, with little or no improvement, his stomach rejecting everything. We then gave him champagne and ice—stopped all allowance of water, except so much as he obtained from ice slowly melting in his mouth and stomach. Under this plan of treatment, with the aid of morphia, he so far re-acted in the next twenty-four hours, as to justify a consultation on the propriety of amputation of left leg. In this, three other medical friends of our city kindly gave us their opinion, and all concurred in the decision that amputation would be absolutely necessary when he re-acted sufficiently. It was then fifty-eight or sixty hours after the accident. This sad information being communicated, I left him to his reflections until a more permanent re-action could be obtained, his condition to be watched every hour. About three hours after, Dr. Daniel informed me that Colonel R. had expressed desire for Dr. W. F. Westmoreland to be called in. Knowing that Dr. W. could not see him in less than twenty hours, I gave it as my opinion that the time to operate in safety would pass before he could get there. After an examination on the next day, by Dr. W., he gave it as his opinion that the time for amputation had passed, if, indeed, he had ever been able to undergo it—the local excitement having set up before his system had fully re-acted. We then decided to give him the chance of life and limb together, (Colonel R. had *apriori* made the same decision,) and directed our treatment to his comfort and ease, both local and general. For two weeks or more, the war between life and death was fierce and fearful, and I am constrained to say, that had he been less indifferent to life, (being not fearful of death or its consequences,) or had he been of a despondent temperament, without a fixed purpose to live for, and a determination to live to accomplish it, death

would have triumphed; but, aided by his indomitable will, we have succeeded in setting him afloat, aided by two additional supports to locomotion, hinged in his axillæ.

The treatment after re-action had been established, was *position* for broken limb; no effort at reduction of sacro-iliac symphysis. At the end of the sixth week, there was a firm osseous union of fractured femur, but free motion in fracture of leg. Applied starch bandage, and in a short time had it rewarded by a firm union.

The dislocation of sacro-iliac symphysis, was followed by almost complete paralysis and anæsthesia of right leg for two or three weeks, but any motion of right hip was attended by severe pain. Strength of right limb slowly improving; left leg two inches *short* and of very little *use*.

GRIFFIN, March 21st, 1866.

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*Extracts from the Minutes of Atlanta Medical Society.*

ATLANTA, March, 1866.

Report of Cases being in order—

Dr. O'Keefe reported a case with the following history: S. W., aged about forty years, light hair and complexion—by occupation a merchant—had spent several years of his life in the British West Indies, and suffered from the endemic diseases of that country, which resulted (he was so informed by his physicians) in enlargement of the liver and spleen, and for which he had been several times *ptyalized*. He was also informed by his medical attendants, that he had some form of cardiac disease.

Notwithstanding this formidable complication of maladies, he enjoyed moderately good health for several years past, whilst a resident of this city, until the past winter, when, whilst traveling on business, he was seized with acute dysentery. He returned to this city in December last, at which time he placed himself under Dr. O'K.'s treatment.

He was, at this time, suffering from sub-acute—perhaps it might



be called chronic—dysentery, from which he gradually recovered. On the eighth February last, being still somewhat feeble, but entirely relieved from the dysenteric condition, he began to experience dimness of vision to such an extent that he could neither read writing nor print, accompanied by a dull aching pain in the eye-balls, over the brows, and somewhat over the whole scalp, as well as within the cranium. Deep-seated inflammation of the eye being apprehended, he was cupped freely over both temples, an anodyne application kept over the eyes and brows, and one scruple of calomel administered. The calomel acted very freely on the bowels, (perhaps half a dozen times,) so that it was not deemed necessary to follow it with any other purgative. The eye and head symptoms were much benefitted by these means—indeed, they all disappeared except the cloudy vision, which was improved. In a few days after taking the mercurial, a very troublesome ptyalism was developed, which required attention for two weeks, and which left his system in a feeble and irritable condition.

About the time he was fairly over his salivation, certain embarrassments of respiration began to show themselves; he found his “breath shorter”—that he slept with his head and shoulders more elevated than usual, and that, sometimes in the night, he was compelled to jump up suddenly in bed and assume the erect posture. At this time I was visiting him once or twice a week, and was sent for to remedy these new developments. I found him in bed with his shoulders propped up and his respiration impeded. He had a troublesome cough which he attributed to a recent cold. The chest was carefully explored in the sitting posture, with the following result: Left side dull on percussion, nearly as high as the nipple, in front, with little or no respiration in the same region. A cardiac murmur was distinctly heard on a line with the apex of the heart, about two inches to the inner side of the usual point of impulse; i. e., very near the point of the ensiform cartilage, and the impulse of the apex was more distinct at this point than at the normal situation. This murmur accompanied the first sound of the heart, and became more distinct as it was traced from base to apex, and less so when followed in the opposite direction. From these circumstances, in regard to the murmur, I infer that the mitral valve was its seat.

Posteriorly there was some dullness on percussion, but not sufficiently marked to be of serious import. Respiration was rather feeble, but was heard at the base of lung, especially close to the vertebral column.

*Right side.* The usual hepatic dullness extended to the seventh rib anteriorly, and a little beyond; posteriorly the percussion resonance was dull, almost as high as the inferior angle of the scapula, and but little respiration over the same region; large crepitant rale, the *crepitans redue* of the stage of resolution of acute pneumonia existed, to a limited extent, in this region.

In percussing the abdomen, intestinal resonance was absent over a belt of that cavity two to three inches in width, below the edge of the ribs, and extending from the right to the left hypochondrium. Indeed, on the right side, the dullness extended almost as low down as the iliac fossa. The abdomen, too, was somewhat tense and distended, but no fluctuation could be discovered.

The symptoms and signs in the case at this point of its history, were interpreted as follows: The dullness on the left side of thorax anteriorly, was regarded as dependent on hypertrophy of the heart, especially of its left side—a result of frequent occurrence in consumption, with disease of the mitral valve. The dullness and crepitation on the right side, posteriorly, were due (it was thought) to latent pneumonia. The dullness in the epigastric and hypochondriac regions, were deemed to mean enlargement of the liver and spleen of long duration. Thus, in brief, the diagnosis made of his case was, hypertrophy of the heart, due to organic disease of the left auriculo-ventricular valve; latent pneumonia of right lung, posteriorly; chronic enlargement of liver and spleen. (NOTE.—I should have stated, in giving his history, that for several years of his life, he had been “a free drinker.”)

I visited him again in a few days, and found all his symptoms aggravated, especially the dyspnoea; for one or two nights he could not lie in bed, but spent them sitting in a chair.

His chest was examined again in the sitting posture, and a uniform and regular dullness was found encircling the thorax as high as the nipples, and extending downwards to its base, and respiration was absent over the same space, anteriorly, posteriorly and

latterly. The crepitant rale on the right side, posteriorly, was gone, and tubal respiration had taken its place, which was especially distinct at the inferior angle of the scapula, and round towards the axillæ. It was now evident that there was effusion in both pleural cavities, and that hydro-thorax was added to his other difficulties. He was put upon a tonic alterative and diuretic course of treatment, and a brisk cathartic of jalap and cream tartar administered. Four days from this time I visited him again; the cathartic had purged him very freely—indeed, was still purging him, without any consequent prostration; the dyspnoea was greatly relieved; he slept quite well and required but little elevation of the shoulders; his ortho-pnoea was gone. The dullness had disappeared, in a great measure, from the left side of chest, and respiration had returned, but there was no change in the physical signs of the right side, nor of the abdomen. What cleared up the left thorax? What removed the dullness and restored the respiration? If it was dropsy, as supposed, and the purging removed the greater part of it on the left side, why was not the right side equally benefited? Supposing the physical signs of both sides of the chest to be due exclusively to effusion within their cavities, would it be possible for purgation to remove it from one side and not the other?

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NOTE.—The condition of this man on this, April 15th, has changed but little since the last record made of it in the report. The left chest is clear, the right still dull, but gradually clearing up. I believe the dullness and absence of respiration due to condensation of lower lobe of right lung—perhaps chronic hepatization. The feet and legs are cedematous, the abdomen enlarged, but no fluctuation perceptible. Indeed, the areola tissue, generally, is somewhat distended with effusion. Dyspnoea still troublesome, and yet the evidence of dropsy of the chest has well nigh disappeared. May it not be due to cedema of the areola tissue of the lungs? On the whole the prognosis is unfavorable.

DR. J. M. BORING mentioned a case of small-pox coming under his notice and management, having anomalous symptoms. The eruption, though sufficiently marked to render the diagnosis undoubted, was by no means so general as usual. Very malignant symptoms were present from the first visit. The skin assumed an ecchymosed appearance, with occasional blebs, filled with sanious fluid, on various parts of the body.

DR. D. C. O'KEEFE had seen a similar case to some extent, and so unlike the usual appearance of ordinary variolous eruption was it, that, at a consultation had to determine the diagnosis, it was decided not to be variola. It being in the country, amid numerous unprotected persons, the results proved the incorrectness of the decision of the consulting physicians.

Both cases proved fatal in a few days.

DR. R. O. WORD reported a case of ulceration of the os uteri, in which he adopted the novel mode of canterising the ulcers, by sponge saturated with solution of nitrate of silver being placed in front of the piston of a female syringe. The instrument then introduced into the vagina, with the perforated extremity coming in contact with the os, the piston is forced against the sponge, and the solution pressed out against the diseased organ. He allows the patient to apply the remedy herself, and, in the case referred to, with the best results.

DR. O'KEEFE thought the uncertainty of the exact position of the cervix and os, particularly in a diseased uterus, would render the application altogether unreliable.

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ATLANTA, March 8, 1866.

Reports of cases being in order—

DR. J. F. ALEXANDER reported a case of purpura, in which quinine was successfully used. He was led to its use by the periodical increase of the prominent symptoms of the disease in this case. Regular daily exacerbations were observed, and, as was his custom in other diseases assuming this periodical character, quinine was given. This report led to a discussion of the general effects and *modus operandi* of quinine.

DR. WORD thought it particularly applicable in the various

forms of congestion; hence, in incipient pneumonia, where local congestion of a portion of the lung exists, and in intermittent fever, where the internal organs are engorged at the expense of the peripheral circulation, it is found to correct the morbid condition. He had also witnessed its salutary effects in menorrhagia; and, in a case where the remedy was used for some purpose, during the healthy catamenial flow, the discharge was arrested, as it would seem, from the effects of the quinine.

DR. ALEXANDER had derived benefit to his patient from the use of quinine in suppressed menstruation.

DR. J. G. WESTMORELAND thought that these seemingly contradictory statements, or antagonistic actions of the remedy, may be *harmonized* by a consideration of its direct action upon the system. By keeping in mind the facts that quinine acts primarily upon the medulla spinalis, and gives tone and energy to that nervous centre when inactive from malarious poison or other causes, the difficulty is easy of solution. The various internal organs, and the capillary and general circulation—being dependent upon the influence of the spinal nerves for the performance of their functions—may suffer the many, and, under varied circumstances, even opposite forms of disturbance, by inactivity of the cord. In a particular condition of the uterus, depressed nervous influence may lead to excessive discharge, while under other circumstances the normal flow may be suspended from the same state of the nervous system. Hence, quinine, by giving energy to the nervous centre, indirectly relieves these opposite forms of functional derangement dependent on enervation.

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ATLANTA, March 10, 1866.

DR. D. H. CONNALLY reported a case of threatened miscarriage at five months, in which there was some dilatation of the os, with slight hemorrhage. The pains, which at first observed short intervals, were measurably controlled by opium.

He desired the opinion of members in regard to the probability of arresting the pains permanently under the circumstances, (the case being at the time in progress.)

Several members thought, from the symptoms narrated, that

there was no cause to despair of permanently arresting the contractions of the uterus without miscarriage.

DR. W. F. WESTMORELAND alluded to the importance of ascertaining whether or not the child be living. He had seen females subjected to unnecessary inconvenience, and perhaps danger, by quieting the action of the womb, and keeping the patient in bed several days under strict directions and regular medications, to prevent the expulsion of the foetus, which, it was afterwards ascertained, had been dead the whole time.

DR. REDWINE had witnessed the difficulties arising from the failure to detect the death of the foetus. A case under his care, in which abortion was threatened at the third or fourth month, went on to the full period of utero gestation, and the woman was then delivered of a dead foetus, with development corresponding with the time of the threatened abortion, proving to his satisfaction that the dead embryo had remained in the uterus for five or six months.

He agreed with other members in the opinion that the appearance of slight hemorrhage and the commencement of dilatation of the os uteri, were not sufficient reasons to despair of arresting the expulsive tendency, and preserving the life of the foetus. He had succeeded where considerable hemorrhage was present.

DR. WORD reported the case of a child fourteen months old, afflicted with pneumonia, in which veratrum failed to produce the usual sedative action upon the heart. It was given to the extent of producing nausea and vomiting, without materially lessening the frequency of pulsations. He desired to get the experience of other members in the use of this remedy with children.

DR. REDWINE, and other members had seen the remedy administered to adults with the same results, but none had noticed the age having anything to do with this failure to produce sedation.

DR. J. G. WESTMORELAND reported a case of acute articular rheumatism, in a female child of eight or nine years old, which promptly disappeared under the action of a blister over the spine and the internal use of full doses of quinine. He mentioned this case in order to call the attention of the Society to this plan of treating rheumatism. Did not consider quinine salutary, or even

beneficial, in many cases of chronic articular and nervous rheumatism. While this is the case, the disease in the acute stage, affecting the joints, is as thoroughly subject to the influence of quinine as malarial fever.

The exact plan of treatment pursued, was as follows: About the 15th March, 1866, called to see the little girl alluded to; found the knees, ankles and right elbow swollen, tender, and most of the time—the right knee particularly—quite painful. The febrile symptoms were high, with an inability to move or be turned in bed without greatly increasing the suffering. These symptoms, commencing two days previously, had gradually grown worse up to the time of the visit. Prescribed three grs. quinine, with ten drops tr. opium, every three hours till three doses are taken. Also applied a blister nearly the whole length of the spine, one inch and a half wide. Being several miles from town, the father was requested to report the condition of the patient next day, which he did, with the information that much relief was afforded, but the symptoms, to some extent, still remained. Ten or twelve grs. more of quinine were prescribed, in three doses, with the same amount of opium, and observing the same intervals as before. Requested further report from the case in a day or two, if the disease gave any further trouble. Nothing more was heard from the case until she was walking about the yard several days afterward.

DR. HENRY ORME had been in the habit of relying upon quinine in the treatment of this disease, and was satisfied with its effects.

## SELECTIONS.

*The Trichina Spiralis*.—By DR. D. W. FLORA, Chicago, Illinois.

Man in all ages has dreaded the "worm" which destroys the body after death, but the "worms" which prey upon the body while living, should give him most concern. These parasites not only find their way into his body soon after birth, but are found in the foetus in utero!

Many species crawl upon the epidermis, hide in its hairy covering or pierce through it and burrow and propagate in the cutis vera or the cellular tissue. These, on account of their habit, are called *Epizoa*. A still larger number inhabit the interior of the body. Not one of the internal viscera is exempt. No less than five species of vermes inhabit the alimentary canal.

The heart, brain, liver, lungs, spleen, kidneys, bladder, and eye has each its peculiar species of parasite. These form the other grand division called *Entozoa*.

Belonging to the latter division is found still another species of parasite which has proven a more deadly foe to man than any or perhaps all the others. This is the terrible *Trichina Spiralis*, and its history and the ravages which it has caused in the animal body form the subject of this article.

Authors on Natural History place it in the class, *Nematodea*. It is a microscopic parasite, and presents a striking contrast with the Guinea worm and Tape worm which exceed a score of feet in length.

It was first discovered in the year 1832, but was not scientifically described until 1835, when Prof. Richard Owen, the eminent zoologist, gave to the world its natural history. It was named the trichina spiralis from its resemblance to a fine hair coiled upon itself, like a watch-spring. During that year six persons were admitted to the London hospitals, who were the subjects of trichina poisoning. Since that time the leading medical men have been on the look-out for this parasite, and several cases have been



observed and fully described. This parasite is only visible to the naked eye when enclosed in its chalky capsule. These appear as small white points, when a section of muscle is examined.

Since the investigations of Owen, many eminent German physicians and men of science have given attention to the subject, among whom we find Virchow, Herbst, Kuchenmeister, Zenker, Bischoff, and, more recently, Prof. Leukhardt, of the University of Giesen, who undertook a series of scientific experiments with this parasite, and to his extended and systematic observations, we are indebted for the very accurate knowledge we possess of this animal. By introducing it into the stomach of the dog, cat, rabbit, fowl, dove and crow, he was enabled to observe all the phenomena of the trichina disease. Out of nine dogs thus treated, seven died, and the muscles were afterwards found *alive*, with free trichina. Of the other animals subjected to similar experiments, more than one-half died. The impression pretty generally prevails that the *fowl* is not subject to this disease, the trituration or grinding in the gizzard being sufficient to destroy the animal. The reverse of this is most probably true, as the grinding process only aids the solvent power of the gastric fluid in dissolving the calcareous shell.

The trichina is usually introduced into the stomach of a man in its capsule, though it is possible for it to find its way there in the free state. This calcareous shell is dissolved by the acid juices of the stomach, and the parasites thus set free rapidly acquire their growth and sexual power, and copulation and reproduction are perfected within one week after their introduction into the alimentary canal. The female brings forth from 60 to 100 live trichinae.

The young swarm immediately commence their work of destruction by piercing the coats of the stomach and the intestines. It is not definitely known how long the parent trichinae live after producing the new swarm, but it is certain that they never leave the stomach and alimentary canal, and probably die within a fortnight. The instincts of the young trichinae impels them to seek the fibre of the *voluntary* muscles, which is known to the anatomist as the striated muscular fibre.

The *brain*, *lungs* and *liver* they avoid, and but a single trichina has been found in the substance of the *heart*. The wonderful instinct of this parasite is equal to that shown by the larva of the ichneumon fly, which is hatched in the body of the caterpillar and other grubs, and there devours the cellular and muscular tissue, but carefully avoids the nervous and circulatory systems which are essential to life. In this way the fable of Prometheus is realized,

the poor "worm" eating and growing, only to be continually consumed.

In order to reach the muscles, the coats of the stomach and intestines must first be pierced, and this boring operation gives rise to a train of symptoms which closely resemble acute diarrhoea and dysentery, as bloody stools frequently occur. Ulceration and perforation of the bowels are frequent results of this inflammation. When the serous membrane lining the abdominal walls is attacked, the symptoms of peritonitis is added. The inflammation of the serous membrane, if it does not prove fatal, leaves the intestines firmly glued together. If the agonized patient should live through these primary acute forms of disease, a new train of symptoms, closely resembling typhus or septic fever, will be ushered in. To diarrhoea, dysentery and peritonitis, will be added intense pain in the muscles, great nervous irritability from prostration, spasm of the muscles, and finally paralysis and death. The muscles of the abdomen, of course, are first attacked, but the trichinae soon find their way to those of the chest and anterior portion of the neck, and by degrees reach the muscles of the back and extremities.

The track of the trichina may be seen as indicated in the last engraving by the white line or band, which was once a striped muscular fibre, but which is now only "detritus," or digested muscular tissue, in which the full grown larva may be seen elaborating its shell, preparatory to entering the pupa or quiescent state. In this stony house the self-immured trichina remains, without doubt, so long as the animal into whose body it has found its way continues to live, which may be decades of years. In this state they are sexless, and the further propagation of the species seems to depend solely upon the accidental circumstance of this parasite finding its way into the stomach of some living animal, where it may develop its sexual characteristics, and multiply its species.

In the transformations of this parasitic animal may be seen many analogies to insect life. The period of wandering and feeding is the "larva" stage. The encapsuled trichina is the "pupa" or "chrysalis," in which state it remains until released in the manner already described. The muscles upon which this animal has fed become useless in proportion to the number of ultimate fibres which are destroyed. When it is remembered that a single ounce of flesh may contain trichina enough to produce in eight days 8,000,000 young, it is not surprising that the entire substance of the abdominal muscles should be sometimes found consumed.

The symptoms progress, and the terrible fatality of this disease is well exemplified in the history of the Hettstadt tragedy, which is taken from a British medical journal :

"The village is situated near the Hartz mountains, in Germany. An annual festival was celebrated there some two years since, and one hundred and three persons sat down to a dinner, the third course consisting of *roste-wurst* and *gemuse*, (sausage and vegetables.) The sausage had been prepared beforehand for this special occasion. The steward, who had been commissioned to furnish the pig for this purpose, gave the butcher a lean, ill-conditioned one, instead of the thrifty one which had been bargained for. The day after the festival, several persons who had participated in the dinner were attacked with pain and irritation of the intestines, with loss of appetite, fever and great prostration. The number increased from day to day, and an epidemic of typhus or septic fever was apprehended, as the symptoms began to assume that character. However, as the disease progressed, the symptoms assumed a different type, and to diarrhoea, dysentery and fever, were added peritonitis, circumscribed pneumonia and paralysis of the abdominal and intercostal muscles with those of the neck. Then the typhus theory was abandoned, and some unknown poison was assumed to be at the bottom of it. Under this conviction, every article of food and material used in connection with the dinner was rigidly examined. By this time the trichinæ had reached the muscles of the calf of the leg in some of the victims, and Zenker's description of the disease was called to mind. The remnants of the sausage were examined, and found to be literally 'swarming' with trichinæ. Portions of muscle from the calf of the leg of the affected ones were examined under the microscope, and were found full of *free* trichina. These were the progeny of the *encapsuled* ones which had escaped the smoking and frying process to which the sausage had been subjected.

"No less than eighty-three of the above-mentioned number died within a few weeks, and the surviving twenty at last accounts were still lingering in agony, and apprehensive of a similar fate.

"This awful catastrophe at Hettstadt awakened sympathy and fear throughout all Germany, and many eminent medical men were consulted in the interest of the sufferers, but none could bring relief or cure. With an obstinacy unsurpassed by any other disease, trichiniasis surely carried its victims to the grave.

"Many *vermifuges* were employed with the hope of removing the parasites still in the alimentary canal. Picric acid was employed, until its effects seemed as dangerous as the disease itself. An examination of the bodies after death showed the trichinæ to have

been unaffected by any of the remedies employed. The terrible conviction now fastened itself upon the minds of all who witnessed these scenes, that a person afflicted with this parasite was doomed to die the slow death of exhaustion from nervous irritation, fever and paralysis of all the muscles."

Dr. W. Mueller, of Homberg, was summoned to the place (Hettstadt) to attend a relative who had been poisoned by this trichinuous sausage. "On my arrival," he says, (Nov. 11th,) "I found the patient—who, previous to the attack, was a strong and healthy man, twenty-three years of age—perfectly conscious, with a slight oedematous swelling of the face.

On examination of the chest, a dull sound over about one inch and a half of the lowest part of the lower lobe or left lung was produced by percussion; crepitating rattles were audible, but there was no bronchial breathing, thus showing the beginning of resolution of the pneumonia; at the lowest part emitting the dull sound, there was a slight pleuritic rubbing. The pulse was 140; respirations 48; and the temperature of the body 39° centigrade. The symptoms of the disease commenced on the 16th of October, with loss of appetite and diarrhoea, followed by a sensation of painful weakness in the limbs and difficulty in moving the tongue, the pulse being above 100.

The patient was not confined to his bed during the day-time until the 6th of November, when the pneumonic symptoms commenced. The day after my arrival, (November 11th,) the symptoms were unaltered, with the exception of the pleuritic rubbing, which had moved a little higher up.

The whole of the pleuro-pneumonic affection was so very trifling that it certainly did not account for a pulse of from 140 to 150, and for the violent oppression, or rather as the patient explained it himself, "the weakness in drawing his breath."

The day following, the frequency of respiration varied between 30 and 60; the pulse was more than 200 and very weak; the temperature had fallen to 38° 6' cent.; and the body was covered with a profuse clammy perspiration.

The other physical symptoms were as before, and the pleuritis had not extended higher. The complaint of weakness in breathing, or as the patient called it, "the impossibility of drawing a sufficient quantity of air into the lungs," was increased; but he remained conscious and resigned, so much so that he several times asked me at what hour I expected he would die. At 7 o'clock P. M., November 12th, he died. The post mortem examination, performed on the 13th, proved an infiltration of a part of the lower lobe of the left lung, extending upwards about an inch and a half

from its lower margin, and three or four ounces of liquid exudation were found in the pleural cavity of the same side. When examining the chest and intercostal muscles, I found in every small piece placed under the microscope, trichinæ partly wound up, but not capsulated, partly forming a single sling and partly extended. In the examined parts of the heart and diaphragm, no trichinæ were discovered.

The piric acid before mentioned, which was so heroically applied in the treatment of the human subject, was administered to a pig infested with trichinæ. The animal died from its effects, but the trichinæ were found alive and unhurt on examining its body.

Prof. Mosler had an opportunity during the epidemic of trichiniasis which occurred at Quedlinburg, in another part of Germany, of trying the efficacy of *benzine* in this disease. It was first tried on the lower animals, and the success which attended its administration, induced him to try it upon man. The form in which it was given was, Benzine, 3 ij.; Sol. Liquorice, Muc. Ac. aa., 3 j.; Aqua Ment. 3 iv. Of this mixture a tablespoonful was given every hour or two.

The conclusions arrived at by Dr. Mosler in regard to this remedy, are as follows: "Benzine holds the first place among anthelmintic remedies, and may be administered in larger doses to the human subject than was formerly thought possible; given in doses which are well borne by the human subject, it kills the trichinæ in the intestinal canal and thus prevents its propagation or the possibility of reaching the muscular tissue.

Since the Hettstadt tragedy, the public mind in Germany has had little rest from apprehension of this terrible scourge. A wholesale poisoning soon after occurred in Offenbach, a manufacturing town in Hesse Darmstadt. Upwards of twenty persons were poisoned by eating trichinous pork, several of whom have died. But Hettstadt, with its tragedy and appalling concomitants, is eclipsed by the late visitation at Hedersleben, another German village, where three hundred inhabitants partook of trichinous pork, and at this writing full one hundred are in their graves. The butcher slaughtered four pigs, which were sold to the villagers. The butcher and his wife, partaking of the same meat, became themselves the earliest victims. A very injudicious custom seems to have obtained in this village, as well as in many other parts of Germany, namely: that of eating pork in a raw state, cut fine and spread upon bread. Although the scenes at Hettstadt were still fresh in the public mind, and the very uniform character which the symptoms always present was well understood by the medical profession generally, yet the people, through fear and ignorance,

fied from what they believed a visitation of *cholera*.. The consequences can easily be imagined. Many were seized with the disease, and died on the highways. The irritation of the stomach, vomiting and diarrhœa, might well be taken for the premonitory symptoms of the above disease by the mass of the people. Indeed, the village doctor was himself misled, and he treated the sufferers with opium and astringents. This treatment was evidently intended to control the diarrhœa; but it proved fatal to the patients, by confining the parasites in the stomach and alimentary canal until they had an opportunity to pierce through the walls. Out of twenty-eight persons treated in this manner, twenty-seven died. One very remarkable fact has been noted in connection with the epidemic at Hedersleben, namely: that as yet no *children* have died of the disease, all having made a good recovery.

The recent developments in Germany will lead many to inquire anxiously into the history of the trichina in our own country. It has been known for some years among medical men that the encapsuled trichina was occasionally found in the muscles of the human body after death, but until very recently no authenticated cases have been reported where death was produced by the disease in question.

In the *American Medical Times* of February 20, 1864, a case is reported by Dr. Schnetter, in which a whole family was poisoned by eating trichinous pork. The father was the only one in which the poison proved fatal. This case occurred in New York city. The *Buffalo Medical Journal* contains the account of two fatal cases occurring in the western part of the State. A man and his wife residing in the village of Chiktonaga were found to be affected by an "apparently acute rheumatism, of a peculiar character." Dr. Krombein, the attending physician, suspected trichinæ, and, the patients having shortly died, a microscopic examination was instituted by Drs. Krombein and Homberger, which demonstrated the existence of the parasite in great numbers. The specimens of muscle taken from the bodies of the dead, together with a remnant of the sausages of which they had partaken, were subsequently examined by Dr. Lathrop and Prof. George Hadley, under the microscope, and trichinæ found in both. In the human muscle they were *free*; in the sausage, *encysted*. Other members of the family were affected, but probably did not eat enough to prove fatal.

All the evidence thus far adduced goes to show that the more the cooking the milder the disease. Those cases in which the pork was eaten *raw*, were of the most violent character, and invariably proved fatal. When it is remembered that this parasite in

its capsule has been subjected to a degree of heat little below the boiling point, without destroying its vitality, the importance of *thorough cooking* becomes apparent to the lover of swine flesh.

In examining pork for trichina, the capsules may sometimes be seen by the naked eye under the tongue; but by far the safer plan is to have a magnifying glass of moderate power—say from ten to twenty-five diameters—which reveals whether it be free or encysted.

It is well known that the common red “earth-worm” or “angle-worm,” is infested with trichinæ, and in this way fowls and swine may become the subjects of the disease, as they devour the worm greedily. An opinion obtains with many persons that what is known as “measly pork,” is more liable to be infected with trichinæ than any other. What facts there are to sustain this belief, we are not acquainted with, but the “measles” in the hog is genuine *scrofula*, and it is a significant fact that the disease just mentioned should have derived its name from *scrofa*, a *sow*. The ancients, however wild or erroneous may have been their *theories*, were nevertheless close and accurate observers of *facts*. In this way the *name* of the disease is made to indicate its *origin*. It is safe to conclude that more disease and death are caused by eating pork *without* trichinæ than *with* them. To those who are determined to eat swine flesh in spite of the trichinæ and the law of Moses, we would give some advice in regard to the manner of rearing them. “As filthy as a hog,” is a common comparison; yet the pig is sometimes libeled. He has his likes and dislikes, and though he seek his food among ordure or in the filthy gutter, yet he will not eat unsound or unhealthy food. If he is shut up in a close pen, and made to swim in his own excrements, he certainly is not responsible for his dirty plight. The fact is now pretty well understood in Germany that the pigs which have been infested with trichinæ were brought up in this manner, and gave evidence of bad health before they were slaughtered.

While engaged in penning this article reports are coming to us daily from different parts of the country of the discovery of trichinous pork, and at Detroit the death of a German lady is reported in whose body this parasite was found. *Thorough examination and thorough cooking* have been insisted upon in this article as preventives of trichina disease; but the only *infallible* one is to obey the Jewish law, and *eat no pork*.—*Cincinnati Lancet & Observer*.

*The Hypophosphites—Their Therapeutic Value.*—By IRA D. BROWN, M. D., Resident Physician and Surgeon of Albany City Hospital.

It must be confessed by all candid and reflecting physicians that the medical profession is exceedingly slow to learn new facts. Such is the reluctance to forsake old methods of practice, that many stumble heedlessly on through life without once getting out of the rut in which they started. With these, inflammation is still the *phlogiston* of the ancients, and a heated surface and bounding pulse the signal for depletion, antimony, calomel, jalap, &c., without regard to time, place or circumstances. Such men seldom learn anything—never make discoveries—never accomplish anything worthy of the noble profession in which they stand immovable as lamp-posts, bearing up only the light of others. On the other hand, there have always been men in the profession who are but too ready to experiment—who, having no stable theory of their own, eagerly embrace the last one that is presented. These are victims in every turn of new delusion; they are ever astride of some hobby, from which they fall only to mount another.

The first class named will always remain obstinate stumbling blocks in the path of scientific progress; truth must advance directly over them, if it advance at all. The second class are the fruitful parents of homeopathy, hydropathy, and kindred shams which, at various periods, have scourged the world and contributed greatly to bring the healing art into disgrace.

We have—thank heaven!—a third class of physicians, never too old or too wise to learn, who are willing to give any theory a fair investigation—to accept whatever of truth may be found in it, and reject with keen discrimination that which stands upon untenable foundations. These are the *real*, the *true* physicians of the world, and worthy to stand by the bedside and minister to the ailments of suffering humanity. They are the men who make discoveries—who do not deem it labor lost to look through a bushel of the chaff of medical literature if they can separate from it one grain of truth—who are willing to mine patiently for the diamond *fact*, though it be embedded never so deep in the clay of absurdity, speculation and folly.

When, less than ten years ago, Dr. J. Francis Churchill announced to the Imperial Academy at Paris that he had discovered a remedy for pulmonary phthisis, the first class of doctors I have referred to simply pronounced the statement absurd, and continued to stumble along in the old paths with which they were familiar. The second class (such of them as chanced at the time to be unhorsed from some of their previous hobbies) mounted Dr.



Churchill's theory and well nigh rode it to death, carrying it to the most ridiculous extremes. The result has been, however, that some of the third class of quiet, thinking students of their profession, having applied the tests of judgment and experience to the subject, have found a new and important agent in the *materia medica*, which, if not equal to all the sanguine anticipations of Dr. Churchill, is still of permanent therapeutic value.

As is well known to those who have read the work of Dr. Churchill, which must ever remain a lasting monument of the enthusiastic research of that physician, the remedies on which he mainly relies are the hypophosphite salts resulting from a union of hypophosphorous acid with a salifiable base. Dr. Churchill's investigations led him to the conclusion that the tubercular diathesis depended upon a deficiency of oxidizable phosphorus in the system, and that the appropriate remedy would be the exhibition of phosphorus in a form capable of oxidation and assimilation. That phosphorus exists in large proportion in the animal economy has long been known, and the additional fact that it is found free in the brain is a demonstration of modern chemical investigation. It cannot be doubted by any intelligent mind that the phosphorus present in the body performs *some* important office, for nature does not distribute the elements without an object. In an article published in *The Boston Medical and Surgical Journal*, in May, 1858, Dr. Nichols, the well known chemist, remarks: "The vital importance of these agents (the hypophosphites) in maintaining a normal condition of the system can be understood by a consideration of the probable fact that in all the operations of the mind, in every effort requiring an expenditure of nervous force, they are called into action. In their rapid oxidation in the brain, on occasions of great intellectual effort, there may be a nearer approximation to literal truth in the remark that there are 'thoughts that burn,' than is generally supposed." This observation is supported by the fact that students and others who are performing a large amount of brain labor excrete an unusual amount of phosphates in the urine, a circumstance I have had the curiosity to test repeatedly. It has been asserted—I know not with what truth—that there is an almost total want of phosphorus in the brains of idiots. If chemical science should succeed in demonstrating this circumstance, it would add another convincing proof of the importance of this element as a generator of nervous power, and might afford a useful hint for the treatment of insanity and other mental aberrations.

It may be assumed, without any stretch of rational conclusion, that if oxidizable phosphorus exists in the brain, blood and tissues of the animal body in its normal condition, its absence or diminu-

tion must create variations from the healthy standard—in a word, *disease*. It thence irresistibly follows that the remedy consists in supplying the deficient element in a condition both assimilable and oxidizable. There is no dispute among chemists or physiologists as to the fact that the hypophosphite salts offer the most direct and philosophical means of supplying phosphorus to the system. The small amount of oxygen in combination renders them easily decomposable in the economy. In the language of Dr. Nichols, "what phosphoric acid may have failed to do in supplying the waste of phosphorus, it is almost certain that the acid containing the less amount of oxygen is capable of accomplishing." The principal theory, then, for the administration of the hypophosphites, rests upon these three foundations:

1. That phosphorus is an essential element of the animal economy.
2. That its undue waste by excretion, or otherwise, is a cause of disease.
3. That the natural remedy is phosphorus in an oxidizable and assimilable form.

That the hypophosphites possess alterative and tonic properties cannot be doubted by any person who has witnessed the sometimes surprising effects following their administration. Dr. Newton says of them, in the *Chem. Gazette*, "They seem to possess the power of increasing nerve force and promoting the function of nutrition." Another effect which has often been noticed by those who are familiar with their administration, is the apparently anodyne influence exerted in cases of morbid vigilance and restlessness. Although the patient may have been disturbed and wakeful, no sooner does he commence taking the hypophosphites than he sleeps soundly at night. They produce no headache, constipation, or other unpleasant symptom, and the patient does not ordinarily become accustomed to them so as to require an increase of dose. The anodyne effect is probably incidental, and follows from the tonic impression upon the digestive apparatus, as it is well known that judicious physical exercise, or anything that improves the assimilation of the food, produces sleep in the same way.

While it yet remains to be proved that any remedy is capable of curing a well-marked case of phthisis that has advanced to the second stage, there can be no reasonable doubt that the hypophosphites, beyond any other remedy that we possess, will prolong the life of the patient. Dr. Wood believes that consumption is occasionally curable. That the disease depends chiefly upon defective nutrition, is almost universally admitted, and if any medicine is capable of remedying the imperfect assimilation of the food, the

hypophosphites will accomplish it, for therein seems to lie their peculiar power. I have seen one case where the patient was much reduced in flesh and strength, with night-sweats and a racking cough, apparently dependent upon tubercular deposit in the left lung, which resulted favorably. Under the use of the hypophosphites, the patient gained strength daily, the night-sweats ceased, appetite returned, and he got rapidly well. I saw the patient again twelve months afterwards, and he appeared to be enjoying very tolerable health, without any signs of the disease which had threatened to put a speedy end to his existence. In the first, or forming stage of phthisis, the hypophosphites may be given with every hope of a favorable result.

But if Dr. Churchill did not discover a remedy for tuberculosis, he certainly did bring before the medical world a class of medicines that are of the greatest value in the numerous diseases resulting from the loss of nerve power; also in many of the diseases of infancy connected with the scrofulous diathesis, and those where the osseous system is defective. In all these cases I have seen them administered with the most beneficial results, and will here mention two or three cases as illustrations.

Mrs. N., 34 years of age, married, of delicate nervous organization; had suffered much from dismenorrhœa; never had children. Patient, when she came under my notice, was considerably emaciated; countenance pale; pulse weak and considerably accelerated; much troubled with cold hands and feet; appetite capricious, but generally poor; frequent pain and sickness at stomach after meals; has some cough; is dejected and gloomy in spirits; had taken elixir of bark and iron, quinine, cod-liver oil, and various other tonics, with very little benefit. Prescribed the following: *R* Hypophosphite lime, hypophosphite soda, *aa* 3 ij.; water, *Oj*. A tablespoonful to be taken thrice daily. Without other treatment the patient rapidly recovered her health and spirits; appetite became excellent; digestion good; gained several pounds in weight, and after taking the hypophosphites six weeks, was to all appearance perfectly well.

Mrs. H., aged 29, had enjoyed very good health until after the birth of her second child, after which she suffered for a year with indigestion, and the long train of nervous symptoms so often witnessed by practitioners that they scarcely need description. She became a prey to the most dismal fancies and gloomy forebodings; passed whole nights without sleep, often in paroxysms of mental anguish distressing to witness. Opiates seemed only to increase the sleeplessness of the patient. She was treated in turn by two medical gentlemen, who exhausted the whole catalogue of tonics

and antispasmodics without giving any relief. When I saw the patient, in addition to the symptoms above detailed, there was much tenderness perceptible upon pressing the fingers on the upper part of the cervical vertebræ. She was ordered to take ten grains of the hypophosphite of lime three times a day. No other treatment was had, with the exception that the patient was directed at first to take a dose of ammoniated tincture of valerian at bedtime, which was soon discontinued. Improvement was noticed almost immediately. On the second night her sleep was undisturbed. After continuing the medicine nearly two months, she appeared perfectly well; appetite and digestion good; sleep sound and refreshing. She assured me that she could never be sufficiently grateful for recovery from a condition she said was "worse than death."

I have only time and space to give one more case, which was that of a boy three years of age, suffering from marasmus. The little patient was much emaciated, his abdomen was distended, he had a diarrhoea, which his mother said had continued with occasional intermissions for nearly two years, sometimes accompanied with bloody discharges. Under the administration of the hypophosphites, taken in milk, two grains a day, his recovery, apparently permanent, took place in a few weeks. I have known a somewhat similar case recover under the use of the syrup of the pyrophosphate of iron, and will not stop now to consider whether the iron or phosphorus, or both, cured the patient.

Without protracting the discussion further, have I not said enough to warrant the conclusion that the hypophosphites are worthy a more prominent place than the appendix to the United States Dispensatory? In the class of diseases to which they seem so well adapted, I believe they will disappoint the practitioner in fewer instances than more pretentious remedies that come to us labelled *official*.

It may be proper to add, by way of caution to those who may desire to make a trial of the hypophosphites, that some of these salts in the market I have found nearly worthless, they doubtless being improperly prepared. It is of the utmost importance that they should be pure, containing the proper proportion of hypophosphoric acid, and it will be well to see that they come from the laboratory of some reliable chemist.—*Boston Medical and Surgical Journal*.

*Whether Cholera is Contagious.*—By JACOB BIGELOW, M. D.

Within the present century, cholera, a disease indigenous in hot climates of the East, has, at various intervals, made its appearance in the temperate latitudes of Europe and America. It is now again exciting interest from its possible and perhaps probable approach to this country.

The experience of the last thirty or forty years has led a majority of medical men who have observed the disease, to believe that, as a general law, it is not contagious. In this belief I must individually remain, until evidence more satisfactory than any which has yet appeared shall justify an opposite conviction.

The great epidemics of 1830 and 1847 had a remarkable coincidence in the path which they pursued, and in the order and dates of their arrival in different cities. They seem to have followed certain great routes of travel, and to have avoided others equally frequented. According to Lesegue, they both visited consecutively, and in corresponding months, Tiflis, Astrachan, Moscow, Petersburg and Berlin. In 1831, cholera did not take the most frequented route from Berlin to Paris, but passed along the shores of the Baltic, crossed over to Sunderland, went down to London, and again crossed the channel and arrived in Paris about six months after its appearance at Berlin. A disease propagated by contagion of any kind, would hardly have avoided the most frequented thoroughfares from Berlin to Paris, while it occupied half a year in going round by England.

The epidemic now, or lately, prevailing in Europe, appears to date back at least nine months, at which time it existed among caravans of pilgrims visiting or returning from the city of Mecca. In the middle of May last it was at Alexandria and Cairo, in June at Constantinople, Ancona and Marseilles, and in November at Paris, Havre and other European cities.

Thus it appears that cholera has now existed in Europe from three to eight months, among cities having constant commercial intercourse with seaports of the United States, during which time thousands of passengers and tens of thousands of bales and packages have been landed in our maritime cities. If cholera were as contagious or portable as many believe it to be, it ought to have begun and perhaps finished its work in many of our seaports before this time.

Epidemics require two things for their introduction and extension. These are—first, predisposition in the inhabitants of the place visited; and, second, the arrival or presence of an exciting cause. This cause in some epidemics, such as small-pox, is contagion. In others it is an occult influence, not yet discovered nor

understood, nor known to be controlled, except in some instances, by hygienic agencies. No country, I believe, has succeeded in keeping out cholera by quarantines, and no country, as far as we know, can produce it artificially or retain it after the predisposition has disappeared. In its own time it moves on thoroughfares where men are traveling, and spreads in cities where they are stationary, for no better known reason than that mankind are its necessary food, and that where there are no people there can be no cholera. But why, of two frequented roads or cities, it selects one and avoids the other, investigators have not yet been able to satisfy us.

The credit of having introduced the present epidemic into Europe, is by a sort of popular acclamation assigned to the hosts of squalid devotees who perform an annual pilgrimage to Mecca. Yet we are told that "the cholera exists every year among the caravans of Musselmans arriving at the holy cities," so that their supposed mission of forwarding the cholera to Europe, in most years fails to be performed.

Cholera, like influenza and some other migratory diseases, has usually, but not always, advanced from east to west. Of the vehicle in which it travels, or the course it is next to take, we know about as much as mankind knew of the cause of lightning before the discovery of electricity. Its conveyance and propagation have been ascribed to air, to water, to material foci, to electricity, to ozone or to the want of it. Of late, in consequence of the vast development by the microscope of the existence everywhere of minute living organisms, it has become more common to ascribe the arrival of this and other like epidemics to unseen "germs" which are called seeds or ova, cryptogamic or animalcular, according as the fancy of the theorist inclines him to adopt a vegetable or an animal nomenclature.

But in this, as in many other cases, it is easier to trace an analogy, or to assume a cause, than it is to prevent an effect. Although inquirers have been indefatigable in their attempts to enlighten the world on the means of ridding ourselves of the presence of the various offensive cotenants of our globe, yet no crusade has yet succeeded in banishing from our fields and houses the unwelcome swarms of mosquitoes, worms, grubs and flies, which molest us with their animal presence; nor in suppressing the blight of grain, the potato rot, or the peach-tree disease. Happily some, if not most of these, have their periods of abatement or disappearance, and this rather through the order of Providence than the agency of man. Cholera seems to abide in the same category. We know little of its exciting cause, and not much of its preven-

tion, except that by following in our personal habits the dictates of reason and experience, we diminish both the frequency and danger of its occurrence.

Whatever may be the cause or vehicle of cholera, credulous and excitable persons are impatient of suspense, and are prone to cut a knot which they fail to untie. When an epidemic disease first appears, some coincidence is always brought to light which is supposed capable of accounting for it. The arrival of a ship, the opening of a trunk, or the washing of a garment, are among the most frequently accepted causes. But as these events have happened a thousand times before, and apparently under like circumstances, without any known results, it has been thought necessary by some of our later writers, to narrow the compass of actual exposure down to the reception of the morbid excretions of one individual into the digestive canal of another. The first impression made by this announcement must, if true, be one of relief, the danger not seeming likely to happen very often. But to the possibility of such danger, we can never oppose an absolute negative, so long as we persist in eating smelts and flounders caught about the mouths of our drains, or even turnips, salads and strawberries raised at Brighton. The risk, however, is so small, that persons will prefer to take it, rather than to deprive themselves of food or luxuries.

Of the many sensation tales printed and re-printed about cholera, and the supposed instances of remarkable communication or arrestation, it is sufficient to say that they are frequently interesting, being fully as dramatic as they are probable.

In the same regard we cannot help noticing that credulity, and perhaps private cupidity, have caused much stress to be laid on the supposed preventive efficacy of what are called "disinfectants," a mysterious word which implies a thing assumed, but not proved to exist. We have deodorizers, such as chlorine, charcoal, etc., which by their combination render certain effluvia imperceptible to our senses. But that these are not *disinfectants*, there is most abundant evidence. The narrative, then, of the physician at Malta, who covered certain surfaces in vessels with oil, and had them "disinfected by chlorine gas," after which "no new cases occurred," is to be classed with other like results, with which the medical press always abounds at the close of epidemics.

In clear and well-regulated cities of temperate climates, cholera is far from being the most formidable of epidemics. A greater part of its victims are the miserably poor, the worn out, the ill-provided, and the intemperate, in whom this disease only anticipates the date, but does not greatly increase the annual or biennial

number of deaths. Its mortality in our northern Atlantic cities rarely amounts to one per cent. of the population in a given place or year, so that a man may reside through an epidemic in one of these cities with less risk than he can take a pleasure voyage to Europe. After having witnessed many cases of cholera in this and other cities, I am farther satisfied that it affords one of the easiest modes of exit from the world.

People who would avoid or prevent cholera, should cultivate equanimity, regularity of life and habits, cleanliness, salubrious exercise, temperance and avoidance of all excesses. When they have done their duty in providing for the care of the sick, allaying public panics, and abating public nuisances, they may safely dismiss their apprehensions. Little good and some harm is always done by the indiscreet agitation of a subject which is to a great extent beyond our control. A single or sporadic case of cholera occurring in a village of a thousand inhabitants may attract little notice, and perhaps pass without record; but a hundred cases in a city of a hundred thousand inhabitants, make an aggregate which generally causes some panic, though the proportion is exactly the same, and the panic equally unnecessary. It is possible that the supposed immunity of country districts in comparison with cities, may be accounted for by the fact, that in the sparse population of country towns cases are less liable to be detected and published.

I may be excused for repeating the following remark from among some "Aphorisms" published by me about thirty years ago, when the disease was new and little known among us. "Should the cholera continue to prevail for three years throughout this continent, it would cease to interrupt either business or pleasure. Mankind cannot always stand aghast, and the wheels of society at length would be no more impeded by its presence than they now are by the existence of consumption, of old age, or of drunkenness."—*Buffalo Medical and Surgical Journal*.



ART. IV.—*Cerebro-Spinal Meningitis*—By E. S. GAILLARD, M. D., Richmond, Virginia.

No one would so do violence to the accuracy and safety of Medical literature, as to attempt an exhaustive essay upon a subject proverbially obscure, and in regard to which so little is satisfactorily or definitely known.

There are few diseases which the physician is called upon to treat, in relation to which even the best medical libraries furnish such limited information, and the largest professional circles such confused, contradictory and perplexing testimony.

The object of the writer, therefore, is not to discuss the subject in extenso, but leaving this fruitful labor to more competent hands, curiously to examine the facts that, during the last four years, have been brought prominently to his attention.

The history of this disease is limited in extent; and, if governed by its teachings, we are to conclude that either this obscure affection is of modern origin, or that early writers failed to appreciate its existence.

Dr. G. A. Moses, who has made careful examinations of all accessible authorities upon this subject, states that "the first recorded appearance of cerebro-spinal meningitis occurred in France, in 1810. It did not attract attention again until 1503; a disease almost similar appeared in 1516 and 1517. After a very severe winter (1558) in Silesia, it carried off large numbers of the population. In 1580, associated as now with catarrhal affections, it killed no less than 10,000 in Rome, 12,000 in Madrid and proportionately large numbers in other cities.

"During the civil wars in France, Ozenaur says 'the armies, Catholic and Protestant, are decimated by a new disease, the subjects being attacked with a sudden and furious pain in the head.' It lasted more than three months and but few were saved."

"Sydenham reports it in 1661, as selecting the young and most robust subjects, and partaking of the character of Typhus."

In 1778, during an epidemic of typhus in Lyle, a disease appeared in all respects similar.

The disease, in more recent years, has appeared at various points throughout the United States, and, during the war, severe epidemics visited many points of interest in the Southern States. At Bowling Green, Grenada, Mississippi, New Orleans, Mobile, Charleston, around Richmond, and in different parts of Virginia, the disease prevailed with much malignity.

It was not until 1830 that any name was given to this disease, and though autopsies do not invariably reveal lesions of the brain

and cord, such injuries are, however, sufficiently uniform to warrant the use of the name selected.

Of the pathology of the disease, but little can be said. Speculations and unsatisfactory arguments have been repeatedly offered, but it is not expedient or useful to present them.

Testimony and recorded facts only can be accepted as reliable premises in the argument, and, until these are placed in possession of the profession, it is unprofitable to expend attention, either speculative or deductive, upon this subdivision of the subject.

The diagnosis of the disease is certainly difficult, unless there be an epidemic prevailing and suspicion on this account be relatively aroused.

The most experienced and vigilant practitioner is frequently deceived, and so no one need blush to acknowledge that a case of cerebro-spinal meningitis has terminated fatally in his hands before any suspicion of the true nature of the malady had been aroused. So many have been mortified and censured, in this connection, that it is well to place this important fact prominently on record.

The symptoms of the disease vary in accordance with the character of the attack. In some cases, where there are no true lesions of the nerve centres (with consequent loss or impairment of sensation and motion) but with inflammation of the meninges, the symptoms are neither as alarming nor as pronounced, as is universally observed in the grave invasions of the disease.

There is just reason for believing, that inflammation of the nerve centres frequently and fatally occurs without actual lesion, death, it is presumed, being due, in such cases, to one of the many complications that are apt to supervene. This fact will explain the great diversity of testimony in the necrology of this disease. Able and competent examiners have failed to find, not unfrequently, evidences of actual lesion in the nerve centres, and have consequently denied not only the existence of these lesions, but the pathological deductions that have been based upon them.

The prominent and interesting fact, in this connection, is, that these lesions are observed in a large proportion of the autopsies of this disease, while death frequently occurs, from supervening causes which produce no such results.

Whether in fatal or non-fatal attacks of this disease, the symptoms are usually, if not invariably, declared suddenly—sometimes after a meal which has been evidently and fully enjoyed. In differential diagnosis, this fact is entitled to due weight.

There is usually prodromic headache, occurring for a brief period, followed sometimes in an hour, by a chill or distinct rigor, with vomiting and purging. This last symptom is occasionally so

marked and malignant in character as to entail a rapid prostration, with collapse and many of the symptoms of cholera. The patient usually, but not uniformly, soon becomes stupid, and his intellect is manifestly impaired. This condition passes sometimes into complete stupor. The headache increases, and acute pain is felt about the base of the brain. Convulsions occasionally occur, but usually the stiffness of the muscles of the neck and back, which is early apparent, rapidly increases, and, without marked convulsion, the patient passes into a condition of opisthotonos.

The pupils are sluggish in action, and trismus occasionally occurs. The reaction is seldom marked, and heat of skin, though sometimes apparent, is an exceptional phenomenon. Pains in the joints and abdomen are frequently a cause of acute suffering. The tongue, at first natural in most cases, is soon covered with fur, and then assumes, in addition to the manifestations observed in typhoid complications, a swollen and distorted appearance. In the Southern States, there has very seldom been manifested the diarrhœa, comparative or colliquative, observed in Europe. On the contrary, constipation has very frequently been obstinate and persistent. Dysphagia and difficulty of speech are frequently marked, many physicians regarding the last symptom as pathognomic.

The pulse is usually, after the first day, small and easily compressible; at first, natural or nearly so; next, it is increased in frequency; this condition subsiding, it frequently becomes abnormally slow, and continuing to be soft and compressible, it fully assumes the thready character that is the herald of dissolution. The ratio, normally existing between the frequency of the pulse and respiration, is generally subverted, and the respiration soon becomes slow and labored.

The skin is usually relaxed, and not unfrequently there is marked diaphoresis. Thirst is incessant. It becomes more and more difficult to arouse the patient, and finally hopeless coma supervenes, with the prodromic phenomena of approaching death.

It will be readily appreciated that, in a disease manifesting such a diversity of symptoms, with but little uniformity usually apparent, one fails to readily and promptly diagnosticate the true pathological condition of the patient.

Nothing of a satisfactory character is known as to the etiology of the disease, the cause assigned being, not unfrequently, as diverse and unconnected as are the localities of prevalence. Depressing agencies, hereditary, dietetic hygienic and climatic seem to be all predisposing and immediate causes of the disease. It prevailed at the South during the past four years, usually in winter

and among those subjects immediately to its rigors, in connection with crude and insufficient diet. As a rule, in the camps, even where the attendant circumstances were similar in regard to diet and exposure, the negroes were the first to suffer, and exhibited the largest mortality. This may be due to that natural want of resiliency which, as is familiar to those who have attended them in sickness, is a physiological peculiarity of the race.

This disease prevails sporadically; though, as a rule, it makes its appearance in the form of an epidemic, and, like all epidemics, it not unfrequently wears a varied livery.

No satisfactory evidence of its contagiousness has ever been presented; though, from its epidemic prevalence, many have been alarmed and induced to fly from imaginary contagion. It is well that the fact of its never having proved to be in the least contagious should be impressed upon the minds of all, when the disease makes its appearance.

The period of incubation is certainly unknown. The evidence so far on this subject is valueless.

Whether as seen in the States of the Gulf, or as in Virginia and Tennessee, in cities or villages, on the seaside or mountain side, in malarial or mountain air, in the pure atmosphere of the country or amid the depressing agencies of cities, the course of the disease seems unaffected by surrounding circumstances. The white soldier on the Rapidan or the negro laborer in Mobile, manifested usually the same symptoms, and the mountain air, surrounding the one, seemed as little to influence the result, as did the seaside atmosphere which enveloped the other. It may be said, then, that city or country atmospheres, *cæteris paribus*, do not alter the results.

There is one remarkable feature of this disease, as it has prevailed in the Southern States, and that is (contrary to its recorded history elsewhere), as many adults as children have been the subjects of its attack.

European writers dwell with some emphasis upon the fact, that, as a rule, children under twelve years of age were almost exclusively affected, and of these children all, or very nearly all, were males.

It is remarkable that the invasion of this disease is confined almost exclusively to the male sex. In the many cases visited, examined or reported, there was not a single instance in which the female, either as an adult or child, had been attacked.

There are no complications so frequently presented as to be regarded as special in character; though, in many cases, complications of hereditary, hygienic or latitudinal origin are observed.

There seems to be no disposition to a recurrence of the disease during convalescence, and generally the patient advances slowly, tediously, but regularly, to the normal condition existing previous to its invasion.

There are no sequelæ observed, deserving of special mention.

The prognosis in this disease is uniformly grave and disheartening. Indeed, one may reasonably expect to see most cases die, and to be surprised, as well as gratified, at each recovery.

In France, through a series of years, the mortality was often eighty-five per cent., and frequently far beyond this. A few practitioners have met with better success, but their records are but little less disheartening. Some of these death-statistics are as follows: 66 of 154; 24 of 40; 122 of 195, etc. Dr. S. C. Young states, that in the epidemic at Grenada, Mississippi, of thirty-five cases, there was not a single recovery.

Though no statistics of the epidemic in the Gulf States have escaped destruction, it may safely be said that the mortality in this disease, throughout these States, has not been less than sixty to eighty per cent. Dr. Moses, of Mobile, who saw very many cases, states that he did not witness a single recovery, and heard of but five. In the majority of fatal cases, death takes place before the fifth day, though occasionally the patient lives until the tenth, and, in rare instances, until the twelfth day.

Few diseases are so frequently fatal, and, as a rule, one would seldom err if he expected death.

M. Gaussaud states that he lost but two cases in one hundred and sixty-two, and ascribes this good result to the fact that, regarding the disease as a cephalagic fever, due to miasmatic origin, he treated all of his cases with quinine. It is extremely improbable that the disease seen in this country can be due to such a cause, or that, with such treatment, the recorded result would be in any respect altered. Most of the epidemics seen in the Southern States occurred in winter, when the air was pure and certainly uncontaminated by any malarial taint. There may have been sporadic cases in summer, and possibly an epidemic at this season, but, if so, the facts have never been mentioned by any of the numerous medical gentlemen interested in the study and investigation of the subject. That the disease prevailed in summer, in the localities mentioned, is certainly very improbable, and no one, so far seen, for a moment entertained the idea that its etiology bears the least relation to malarial or miasmatic poison; nor did the use of quinine produce any material results.

It must be borne in mind, that the mortality mentioned in those cases, where the disease is clearly pronounced.

There are cases in which there is meningeal inflammation, without loss of motion, sensation or speech, and, in such cases, the number of recoveries is very much greater. Where there is opisthotonos, or trismus, or loss of speech or motion, it may reasonably be expected that not more than eighty in one hundred cases will recover.

In treatment, the physician must expect to be disheartened and disappointed. It would be time uselessly spent to record the varied forms of treatment which have been faithfully and fruitlessly instituted. In this disease no one has any special remedy to recommend.

Routinists, Empirics and Professional Egotists meet here, on common ground, with the scientific practitioners of the country, confessing a common disappointment and mortifying inefficiency. Clinical experience in this disease accomplishes at least one good result, in being the grave of presumption and therapeutic fanaticism.

It is generally conceded, that the most advisable form of treatment is the free use of the lancet and the scarificator, *before* any evidences of prostration or collapse are manifested.

The physician seldom sees a patient in time to institute such treatment, but when the opportunity occurs, experience certainly demands a prompt and fearless resort to it.

The use of mercury, both in full doses at the commencement of the disease, and afterwards for its constitutional effect, is admitted to be the most reliable form of treatment that can be adopted. The general testimony, both in Europe and in America, warrants the early and persistent use of this remedy.

Stimulants should be used, but there is no doubt that in the treatment of this disease, as in that of many others, the prevailing tendency is to use the remedies unnecessarily and injuriously. Where stimulation is required, the use of rubefacients, with hot applications to the cutaneous surface, will most beneficially protect the brain and nervous system from the influences of alcohol, given, very commonly, with poisonous and overwhelming frequency.

In this disease, the centre and citadel of animal life are assailed, and it is certainly culpable to recklessly subject them to any influences that lessen the powers of successful resistance. Alcohol is certainly the therapeutic boon, but most physicians have seen its injudicious use destroy the last manifestations of nervous resiliency.

While, therefore, stimulation is frequently, if not universally, required, it should be most cautiously and attentively instituted, and the adjuvants of friction and hot applications rigidly enjoined.

Opium may sometimes be admissible to relieve suffering and procure rest, but it should be carefully and guardedly used.

Chloroform, given to a partial extent by inhalation, will be found to relieve the suffering occasioned by muscular spasm, but, for manifest reasons, this should be administered only when the exigency of the case really demands it.

In this disease, as in most others, many incidental symptoms will be manifested requiring attention, but these will, of course, be treated on general principles.

In the autopsies, where death has occurred, with manifest lesion of the nervous centres, the phenomena apparent are so uniform in character, that, after a single inspection of the brain and its meninges, at the table, or after seeing a correct drawing of them, the scalpel will alone often solve the mystery of an unintelligible death.

The post-mortem appearances of the brain, in death from this disease, are characteristic, and it is therefore with special satisfaction and pleasure, that a correct representation of them is presented in the chromo-lithograph furnished with this article.

This drawing was made at the table, and to Dr. G. A. Moses due acknowledgement is made for the opportunity of presenting it to the members of the profession. So far as is known, there is no drawing of this character accessible, (if one has ever been presented) and it is believed that the plate presented, both in delineation and coloring, is so accurate, that any one familiar with it would be enabled to identify the disease, whose ravages are there depicted.

The dura mater is usually uninjured, while the arachnoid, both cerebral and spinal, almost invariably furnishes evidences of acute inflammation.

The large veins of the pia mater are turgid and much congested, and seen through the coat of lymph and greenish yellow pus, present an arborescent appearance, marked and distinct. This greenish yellow pus and lymph are also seen on the surface of the encephalon, and at the base of the brain it is found in quantity. It is also found in the subarachnoidal space of the cord, and it envelops the cord very generally.

The substance of the brain and cord is, so far as is known, seldom injured, though at times there is some effusion in the ventricles, and incipient evidences of softening in the nervous substances; as a rule, however, the substance of the brain and cord is found uninjured.

It is to be regretted, that, even after the sad and disheartening experience of so many epidemics, our knowledge in regard to this disease is so limited and unsatisfactory. Its etiology and pa-

thology are equally obscure, and its livery so varied, as to render identification difficult and sometimes impossible. Its treatment is most perplexing and disheartening. The sick man lies doomed and helpless before us, and after comparatively few hours of just alarm and conscious agony, passes into the dream-land of blessed delirium. Disease mercifully administers that "sweet oblivious antidote" which, in his conscious moments, he vainly craved from man, and soon even the ignorant bystander recognizes the fact that—

"The life of all this blood  
Is touched corruptively, and his poor brain  
Doth, by the idle comments that it makes  
Foretell the ending of mortality."

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*The Value of the Laryngoscope.*—By G. BRUHL, M. D., Cincinnati, Ohio.

Among the valuable additions of modern times to our means of exact diagnosis and treatment, the laryngoscope holds a very prominent place, and with certainty may we predict, that ere long no practitioner will be considered a good diagnostician who does not understand its use as well as that of the stethoscope or uterine speculum. Surely it is not necessary that every physician should acquire the dexterity of a specialist; not necessary that every one should be able to cauterize ulcers of the ary-epiglottidean folds, remove foreign bodies from the hyoid fossa, or extirpate morbid growths from the vocal cords; but *it is necessary* that every one shall become sufficiently master of its use to be able to detect at least these pathological conditions and avoid the blunder of the distinguished London professor, who sent his patient, a young lady who had been aphonic for several years, to the country, to breathe the fresh air of her native place, and have the mortification afterwards of learning that some specialist had cured her by the removal of a polypus from the vocal cords.

True, the application of the laryngeal mirror is somewhat difficult for the beginner; but is the art of auscultation and percussion easier to be learned? Months, sometimes, will pass away before the student understands the meaning of the physical signs. In laryngoscopy, a little skill and energy will overcome in less time the presenting obstacles, and the labor bestowed for this purpose rewards richly. Wonderful are the results, and he who has once



seen through the rima glottidis of a sufferer, fed on cod liver oil and hypophosphites *ad nauseum*, and who had detected there, not tubercular deposits as supposed, but a morbid growth as the real *materia peccans*, best knows how to appreciate the great value of this diagnostic apparatus.

Bringing a hitherto hidden cavity under our direct observation, the laryngoscope has not only corrected our physiological views of the functions of the different parts of the larynx and pharynx in the act of phonation and deglutition, but it has, what is of greater importance to the practitioner, taught us to interpret accurately the symptoms of the laryngeal diseases, and has enriched and enlarged our knowledge of their pathology and treatment by giving us new and direct indications, and guiding our operative manipulations.

We do not need to fill up our symptomatology with mere guess work, or form our ideas by philosophical—often erroneous—deductions and speculations. Those morbid changes, of which we can find no trace on the dissection table, or if any, only in the last stages, we can now observe from the beginning to the end. We see now exactly every part which is affected, see the size, the seat, the shape, the extension of the morbid processes and growths; can even explain the causes why certain parts by their anatomical and physiological condition are more liable to certain diseases than others; we know what parts of the larynx are pre-selected by certain diseases for their morbid deposits and destructions, and why they are; nay, even we can distinguish the different forms of the morbid changes of the epiglottis as well as those of the glottis muscles.

And this is of peculiar importance in the treatment of aphonia; for experience has shown that in such cases, where aphonia is merely dependent upon paralysis of the glottis muscles, the electric current effects an infallible cure. Why, we do not understand at present; time may clear the secret, but the assertions of renowned laryngoscopists are too numerous and too positive to allow a doubt in the truth of their statement.

The superior usefulness of the laryngoscope, however, is best shown in its being the only reliable means of detecting the morbid growths in the larynx. All the signs and symptoms heretofore attributed to them are uncertain; either they can be wanting according to the size or seat of the tumors, or they can be assimilated by other diseases. Therefore the grossest diagnostic errors have been committed; the most irrational modes of treatment instituted; therefore so many lives unnecessarily been lost. Wherever the doctor came across a patient with hoarseness, aphonia and trouble-

some cough, he was sure to feed him on cod-liver oil or send him to some watering place, there to be cured from his supposed laryngeal phthisis or catarrh. But hardly one thought of morbid growth within the larynx.

In prelaryngoscopical times, therefore, not more than eighty cases of this kind have been reported, and most of them were only detected upon *post mortem* examination. In five cases only were successful operations performed. No wonder: the diagnosis being uncertain, nobody could tell which cases would be favorable for surgical aid.

But since the few years of the discovery of the laryngoscope, the history of these growths has undergone a total change. More than a hundred new cases have been reported and successfully operated upon. A precise aid for the diagnostician's eye and a sure guide for the operator's hand, the laryngoscope has made success certain, where it has been heretofore but accidental. Cauterization of ulcers, opening of abscesses, removal of excrescences, scarification of hypertrophied parts, can now be practiced with the same preciseness, though with more tediousness, within the larynx, than on the outside surface.

Even in such cases, in which by laryngoscopic examinations only a negative result is obtained, we are at least taught that we have misinterpreted the symptoms, and that we have to seek for the real seat of the disease elsewhere than in the larynx.

Semeleder gives several very interesting cases of this kind, of which I will relate but one. He was called to examine the throat of a lady, apparently dying from suffocation. The most careful examination had revealed nothing positive; the attending physician, suspecting some trouble in the larynx, had concluded to perform tracheotomy to relieve her from her sufferings. The laryngoscope did not detect any abnormal condition, but as there existed a difference between the radial pulses, the doctor declared an aortic aneurism as the real case of the dyspnoea, and the operation useless and uncalled for. The attack passed away, and the symptoms becoming subsequently more distinct, the correctness of his diagnosis was corroborated. The lady soon died, but she died without an unnecessary operation. The laryngoscope saved her at least the addition of a new suffering to her old one.

Czermak relates a similar case in his *Der Kehlkopf Spiegel*, page 107. A lady was about to be operated upon for a supposed stenosis of the larynx. The instruments lay spread on the table, when the surgeon, a distinguished one, cautious enough, sent for the laryngoscopist, to ascertain the correctness of the diagnosis. Well, the larynx was found in a healthy condition, of normal size,

without any obstruction. These cases are of peculiar interest, as they demonstrate clearly that laryngoscopic examinations can give positive contra-indications against *tracheotomy*—perhaps better against useless operations, to which the surgeon, deceived by the symptoms, otherwise might be misled.

Now, if in the face of these facts any one doubts the value of the laryngoscope, or ridicules its practicability, he is not its, he is his own enemy. Not every one can be a genius; not every one advance new ideas or invent new instruments, but every scientific physician should be prudent enough to profit from practical discoveries.—*Cincinnati Lancet & Observer*.

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*Starch-Water Applications in Burns and Scalds.*—Among the many applications suggested to allay the smarting, to control the troublesome heat and pains of minor burns, or to mitigate the irritability and extreme suffering of severe scalds, partly worn domestics, soaked in *cold* iced starch-water, so applied as to exclude the atmosphere, and continually kept wet by dropping the water on it with a sponge or otherwise, will have a doubly beneficial effect—temporary relief and the keeping of the temperature continuously low, and thereby holding the inflammatory process in abeyance. (Often, if the bowels are watched and made to act freely, there will be but slight inflammation.) When the pain and heat are measurably controlled, which will be in two to four days, the removal of the cloths, and the application of the glycerole of lead, with a camel's hair pencil, or by cloths saturated in it, will result in a speedy cure by resolution, without much vesication, or the formation of ulcers, or secretions of pus. The advantage of starch-water and cloths, over dressings by cotton wadding, oil and lime water, I conceive to be, that it is cooling, while the latter is heating; less bulky; will not, if properly kept wet, adhere to the denuded parts; can be, if required, readily dressed by the attendant, without much trouble or undue pain, because it is always accessible, and should decided suppuration supervene, the fetid odor will not become disagreeable because of the difficulty of removal.—*Medical and Surgical Monthly*.

## EDITORIAL AND MISCELLANEOUS.

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### ATLANTA MEDICAL COLLEGE.

This institution is about entering upon its eighth regular Summer Course of Lectures. The building, up to a few days since, has been occupied as a hospital since 1862. The Confederate and Federal armies, accordingly as one or the other of these authorities were in possession of the city, found here comfortable accommodation for two hundred of their sick and wounded. In order to make it suitable for this purpose, the amphitheatre and chemical lecture room were deprived of the expensive fixtures they contained. Half the building was obtained from the military authorities in November last, and fitted up for the winter session. The library, museum and laboratory, though the subjects of considerable depredations, with a moderate outlay, have been sufficiently replenished for all practical purposes at present. Seats and other fixtures, in all the lecture rooms, have been replaced in exactly the former styles. All other repairs necessary for the comfort and convenience of teacher and student, have been made. Material in abundance, for the practical study of anatomy, and plates, models, wet and dried preparations, specimens, etc., etc., suited to the practical demonstration of the several departments of medical science, are in readiness for the approaching session.

The heavy expenditures necessary thus to supply the appliances, and refit the building, have been made by the sacrifice of personal convenience, that the expectations formed from facilities heretofore afforded by the College, should not be disappointed in the class soon to assemble.

From data in our possession, we conclude the number in attendance this session will far exceed the expectations of the Faculty

when the announcement of the Course was published. Indeed, the interest manifested recently would indicate an attendance equal in numbers to an average of the classes in more prosperous times prior to the war.

The Faculty undertake the labors of the Course, commencing first Monday (seventh day) in May, with renewed energy, and with the determination conscientiously to discharge their duty to the student, to the profession and to the public.

That system of instruction thought best to promote a thorough understanding of the principles of medical science, will be pursued. The impressive mode of teaching by daily recapitulations, and by the examinations, of those desiring it, upon the previous lecture, is a plan adopted by the Faculty, which we think cannot be too highly estimated. When a large number of facts is presented to the mind, it is only by repeatedly and impressively calling attention to them that they can be retained.

In the study of Anatomy by demonstrations and dissections, we think the summer gives decided advantages over the winter months. The idea that subjects could not be kept for use during warm weather, upon which depended mainly the opinion that "medicine cannot be successfully taught during the summer," has effectually exploded. It has been practically demonstrated for the last ten years, that subjects properly prepared may be kept for any desirable length of time, and may be used for weeks during the warmest weather without unpleasant odor or softening of the tissues.

By an arrangement effected with the authorities, the freedman's hospital, located conveniently to the College, is made subservient to the interest of the Institution, in the study of clinical medicine. A variety of the ordinary acute and chronic diseases of the country, are made available daily for this purpose. While very large hospitals may give additional advantages to the advanced student, whose course of didactic instruction is concluded, yet to those being taught the fundamental principles of the science of medicine, a hospital of seventy-five patients affords all the material necessary, for the time that can be profitably devoted to clinical study.

All the surgical operations in the private practice of the Professor of Surgery, which can with propriety be performed in the

operating room of the College, and all surgical cases in the hospital, will be presented for the benefit of the class.

We know very little of the determinations and movements of sister institutions, South, but we think they are getting under way for a renewal of their labors. Most of them have already held one session since peace was restored. We wish all of them success and prosperity in their laudable efforts to inculcate the principles of scientific and honorable medicine, and we hope the Faculty of the Atlanta Medical College, as a body, will be of one mind in keeping aloof from petty jealousies, the spirit of dishonorable rivalry and useless contentions. At the same time we shall advocate the unflinching maintenance of those principles acknowledged by medical schools, as the foundation upon which the honor of the profession, and welfare of the community depend. Honest differences of opinion may exist, as to the system of instruction which gives the greatest advantages to those preparing for a place in the profession, but all acknowledge the principle and understand the means of withholding their sanction of dishonor to the profession, and injustice to the public.

Upon medical colleges rest grave responsibilities. They are entrusted with, not only the preparing, but the commissioning duty, and in the perversion of this function, a curse, instead of a blessing, is sent out upon the community.

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*Recent Advances in Ophthalmic Science. The Boylston Prize Essay for 1865.* By HENRY W. WILLIAMS, M. D., Ophthalmic Surgeon to the City Hospital, Boston; University Lecturer on Ophthalmic Surgery in Harvard University; Member of the American Ophthalmological Society, etc., etc., etc. Boston: Ticknor & Fields. 1866.

The immense progress which has been made in Ophthalmic Surgery, within the past few years, makes a brief *resume* of the many brilliant advances in this department of medicine, a desideratum in the profession. It is more particularly the student of medicine and general practitioner, who have so much felt the urgent and growing necessity of a work which, without being too

elaborate, would present all new facts in regard to the improved means of diagnosis, pathology and treatment of diseases of the eye. This little work of 166 pages supplies the demand, and is all that could be desired.

The first twenty-five pages are devoted to the Ophthalmoscope, its practical application, and the advantages to be derived from its use—illustrated with plates which furnish to the novice in these studies the most perfect demonstration of the principles involved and their application, that we recollect ever to have noticed in any previous work. To the Ophthalmoscope the author attributes many of the recent improvements—regarding its application as a means of diagnosis, the commencement of a new era in Ophthalmic Surgery. In speaking of this instrument the author says:

“It is not claiming too much to assert that the ophthalmoscope has done more to increase our knowledge of diseases of the eye than had been accomplished during a century by all other means. The practitioner is not now obliged to include a large number of deep-seated diseases of the eye under the designation ‘Amaurosis,’ to which the well-known remark of Walther was, unfortunately, but too apropos—‘a condition where the patient sees nothing, and the doctor, also—nothing.’ *‘Je ner zustand, bei welchem der Kranke nichts sieht, aber der Arzt auch nichts.’* He is relieved from many embarrassing uncertainties in diagnosis, painful to himself, and more or less detrimental to patient, and is no longer in the dark; but, in regard to the interior of the eye, can speak of what he knows and testify to what he sees. . As accurate diagnosis is and must be the basis of all successful treatment, the oculist can already point to brilliant therapeutic triumphs over diseases hitherto deemed incurable, which have directly resulted from the knowledge acquired by means of this instrument.”

Considerable space is devoted to the modifications and improvements in the operation for cataract; several are discussed—one of which we have never seen suggested before. This method consists in the insertion of a suture in the cornea after the extraction of a cataract. The author says: “So far as I know, the inser-

tion of sutures in the cornea, after extraction of the lens, to facilitate primary union of the flap, has never been performed or suggested, until lately by myself. I have done this in a considerable number of instances, and thus far, with invariable success; and after careful observation of the results obtained, can advocate this method as possessing numerous and important advantages. I prefer a straight needle, only a quarter of an inch long, made by cutting off the requisite length from the head of the finest sewing needles and forming a new point. The needle is held and passed through the cornea by means of a pair of firm forceps, and the suture, formed by a single strand of silk, or the finest thread, is tied—not too tightly. This is allowed to remain until it cuts itself out, which is sometimes not for several days, or even weeks, as there is danger of re-opening the wound if its removal is attempted, unless during anæsthesia. From the usual intolerance of the cornea of the presence of foreign bodies, we might expect that the suture would give rise to much irritation, but such has not been the fact, as I have known it to remain in situ for seven weeks without causing inconvenience.

“Every one will appreciate the immense advantages to be gained by such a means of insuring immediate union of the corneal wound, if the question of tolerance be once determined in its favor.”

If we had sufficient space, there are many other features of this interesting little volume that we would be pleased to notice. No work upon this subject contains so much valuable information in so small a compass. It certainly deserves a place in the library of every intelligent reading physician.

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*Biographical Sketches of Distinguished Living New York Surgeons.* By SAMUEL W. FRANCIS, M. D., Fellow of the New York Academy of Medicine. New York: Published by John Bradburn. 1866.

The above is the title of a neat little volume of 220 pages, giving the principal facts connected with the individual history of the following named Surgeons:

Valentine Mott, William H. Van Buren, Alfred C. Post, Frank



H. Hamilton, James R. Wood, Lewis A. Sayre, Alexander B. Mott, John P. Batchelder, Alexander H. Stevens, Willard Parker, Gurdon Buck, John Swinburn, Julius Stephen Theband, Stephen Smith and Alexander E. Hosack.

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*Medical Association of Georgia.*—It seems the appointment for the next meeting of this body has not yet been made, but we suppose it will not be longer delayed than is absolutely necessary to have a full understanding among the officers, committees, etc., in regard to time, place, etc. It is certainly determined to have the meeting some time the present year, and we shall heartily concur in any arrangement that may be thought advisable. Let the appointment for the meeting be made, so that the organization does not pass away by default, and we are content.

Those who feel inclined to write prize essays, may do so with the assurance, we are informed, that the prizes will be ready for the successful competitors.

The following are the officers elected and committees appointed at the last meeting of the Association, held in Atlanta, April 10, 1861:

Dr. J. T. Banks, of Griffin, President.

Dr. J. F. Alexander, of Atlanta, 1st Vice President.

Dr. V. H. Taliaferro, of Columbus, 2d Vice President.

Dr. A. G. Thomas, (then) of Atlanta, Secretary, &c.

Committee appointed to raise \$100, to be distributed as prizes for the three best essays presented to the next meeting—\$50 for the first, \$30 for the second, and \$20 for the third. Committee: Drs. O'Keefe, Taliaferro and Boyd.

Committee to examine prize essays—Drs. H. Coe, A. Means, J. F. Alexander, H. W. Brown and T. C. H. Wilson.

Committee appointed to procure orator and alternate for next meeting—Drs. Coe, Dannelly and Brown.

On motion, the President was required to appoint, at his convenience, a committee of arrangements.

*Resolved*, That the Committee on Prize Essays be instructed, in awarding prizes, to give preference to subjects of practical interest to the profession, and to award the prizes publicly, during the session of the Association, in cash or its equivalent, at the discretion of the committee.

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*Our Contributors.*—Some of our promised contributions are being sent in. We are in receipt of an article from our esteemed friend, Dr. V. H. Taliaferro, of Columbus, Georgia, but too late for this issue. It will appear in the June number. Enthusiasm and sound sense, in ante-war-times, characterized the many articles furnished this journal from his pen. The hardships and privations of camp life for four years, have not, we are glad to see, destroyed his interest in, nor his knowledge of, those great principles in medical science which he so successfully studied in years gone by. His productions are always welcome to our pages. Would that all men were as true to the principles of honor and justice as he, in whatever sphere he moves—whether in the tented field, as commander of a regiment, in the sick room as prescribing physician, or in the study, seeking the hidden truths of medical science.

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*A New "Inhaler" for Sulphuric Ether.*—We have received a description of this instrument from its inventor, F. D. Lente, M. D., of Cold Spring, New York, and we are glad to learn, in this way, that our New York brethren are at last turning their attention towards sulphuric ether as a preferable anæsthetic to chloroform. In this instrument the ether is applied on a cone of flannel fitted upon a frame of light wire, and so adjusted as to be kept supplied with ether as occasion may require, without the necessity of removing it from the patient's face during the inhalation. Tieman & Co., of New York, are the manufacturers of the instrument.—*Boston Medical and Surgical Journal*.

*Rapidity of the Progress of Cholera.*—A noteworthy fact in the history of epidemic cholera, is that it has never travelled with greater rapidity than *man can travel*. In India, says Prof. Clark, its march of progress was about 21 miles a week, sometimes less. In Europe it averaged from 80 to 100 miles a week, which is just about in the rate of increased facility and rapidity of travel in Europe as compared with India. In its crossing of seas, the Atlantic, for instance, it has travelled at a rate of about 300 or 400 miles a week, about the rapidity of the travel by vessels. During the late epidemic from Mecca to Alexandria, Ancona, Marseilles, Southampton, Paris, etc., it seems to have travelled with greater speed than formerly in Europe, owing, undoubtedly, to the increased facility and rapidity of intercourse by the modern means of locomotion.

Whatever general terrestrial or atmospheric causes of cholera there may be, its progress and spread seem dependent upon special and personal contingencies, and so long as there is such high probability that the cholera poison or the special miasm which forms one of its factors may be carried by persons or baggage, we hold that a humane but strict and uniform system of quarantine is a necessity, and we call upon Congress to bless the nation with a good quarantine code.—*Reporter*.

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*Plan for Quarantine for Cholera.*—We have received a plan for quarantine for cholera, originally addressed to the *Quebec Morning Chronicle*, by W. Marsden, M. D. It is based on the writer's study of the disease during five distinct epidemics, within the last thirty-four years. The basis of the plan is "absolute non-intercourse, for a short period, with persons from abroad suspected of being infected, and a thorough disinfection of personal effects." The paper contains a ground-plan of a quarantine-station, with a minute description, together with a strict code of rules for its management. The limit of detention for healthy persons, arriving in infected vessels, is ten days; and they are to be kept quite isolated from the sick.—*Boston Medical and Surgical Journal*.

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ORIGINAL COMMUNICATIONS.

ARTICLE I.

*Cerebro-Spinal Meningitis, with a report of Cases.* By W. S. ARMSTRONG, M. D., of Atlanta, Ga.

In general, the symptoms which characterize this disease are of a severe character. In the midst of good health, after taking a hearty meal, or after a full day's work, the patient, without any premonitory symptoms, is suddenly attacked with coma, or stupor, so profound that he is with difficulty aroused even for a moment.

In other cases vertigo, pain in the head and cervical region, extending along the spine, with lassitude and apprehension of impending danger are observed. Then again, chilly sensations at intervals of two or three hours, with cold extremities, followed by exacerbations of heat, flushed face and increased pulse, mark the approach of the disorder. Lastly, delirium, more or less wild, with a disposition, forcibly, to leave the bed or room, is in the outset a prominent symptom.

The epidemic of Cerebro-Spinal Meningitis, as it came under my observation at Mobile, Ala., during the winters of 1868-'64,

and '64-'65, no matter what the symptoms, either in the formation or advanced stage, was equally grave in its import.

The condition of the pulse was variable; usually ranging from ninety to one hundred, hardly reaching one hundred and ten, unless just before the termination in death; on the other hand, it occasionally sank to forty or fifty beats per minute. Vomiting of bile and constipation are usually in the beginning, prominent symptoms; the tongue is furred, and as the disorder advances, the teeth become covered with sordes.

The urine is highly colored, scanty and often retained; at other times, especially towards the close, it is passed involuntarily.

Intolerance of light and sound, when present, appear at the early part of the attack—the least ray of light being sufficient to cause spasmodic closure of the eyes and intense suffering; walking across the floor is excessively annoying to the sufferer; deafness and a general indifference to surrounding objects, is occasionally noticed.

The most prominent and almost universal symptoms, are pain in the head and neck, accompanied by a tetanic rigidity of the cervical muscles, and of the large extensor muscles of the back. This trouble, slight at first, increases until the head is drawn back upon the shoulders, and no ordinary degree of force used by the attendant can overcome it. The muscles of the back and lower extremities are occasionally so much involved as to produce complete opisthotonos. In connection with this condition, paralysis of the muscles of the face is sometimes present, as exhibited in depression of the lower jaw and protrusion of the cheeks and lips in expiration. Involuntary twitchings of the muscles and want of prehension often exist also—the patient being unable to drink without assistance. Strabismus in one or both eyes was met with in several cases. The appearance of the pupils is not always the same, in the majority of cases being dilated; sometimes one is contracted and the other dilated, and I have occasionally seen both contracted.

Delirium may be present at any period of Cerebro-Spinal Meningitis, though most common in the latter stages, before coma sets in, and is then of a low, muttering character.

When coma comes on, which is usually about the fourth or fifth

day, the pupils become widely dilated, the pulse more full, but is never, so far as my observation extends, of a bounding character, as in coma from apoplexy. Involuntary discharges from the bowels and bladder are now of most frequent occurrence. Stertorous breathing is rarely present, and until the coma is profound, the patient is continually tossing himself from side to side in bed, and carrying his hands to his head as though in great pain.

Another very common symptom is Hyperæsthesia of the whole nervous system; pressure upon the extremities, slight moving of the feet or bending the toes, causes the patient to cry out from pain. This exaltation of sensibility does not often appear at first, but towards the latter part of the attack. While vertigo, pain in the head, chilly sensations, intolerance of light and sound, deafness, stupor, exalted sensibility of the nervous system, delirium and coma were the usual symptoms by which this epidemic was characterized, yet there were a few cases of an intermittent type, accompanied by high fever with pain in the head. Under the use of Quinia these symptoms would yield for a few days and convalescence seemed to be established. A recurrence of these symptoms would take place two or three times, when those more violent, as extreme pain in the head and neck, rigidity of the muscles, &c., would supervene, and declare unmistakably the formidable nature of the disease.

The duration of this affection is variable; it may destroy life in twenty-four or forty-eight hours, but from five to eight days is the usual time. During the winter of 1863-64, it proved fatal sooner than in the following—a few of the last cases seen having lived from ten to fifteen days.

**CASE 1.**—*Cerebro-Spinal Meningitis*—*Effusion of Lymph on Cerebrum and at the base of brain*—*Serum in lateral ventricles*.—Private H. O. —, age about forty, was admitted into hospital, Jan. 17, 1865. Antecedent history. Some six weeks ago, after being exposed to the weather a good deal, both day and night in camp, he had three chills, the last of which was congestive, and four days elapsed before consciousness returned. In a short time he was convalescent. This history was obtained from a comrade. Present condition. He complains of soreness from head to foot,

has frequent rigors, and is unable to express himself clearly; pulse 90; tongue moist and furred; bowels constipated. Ordered a cathartic and Quinia. Jan. 18.—Pulse 98; bowels moved five times from purgative; skin has been warm since admission; pain in the head and neck. Ordered blister to the back of the head and neck; repeat Quinia. Jan. 19.—Pulse 90; pupils contracted; unconscious; head drawn back from contractions of muscles; breathes through his mouth; raises his hands to his head as though in pain. To have blister to the head. Jan 20th.—No improvement; pulse 100 and weaker. To have cathartic and spirits of wine at short intervals. Jan. 21.—Pulse 120 and very feeble; skin warm and perspiring; comatose; opisthotonos, which began to develop itself yesterday, is very marked. Died at 11 P. M.

Autopsy Jan. 22d. The anterior, two-thirds of cerebrum superiorly, are covered with an adventitious deposit of lymph, of a greenish yellow color, forming adhesions between the arachnoid and pia mater, and following the latter as it dips down into the convolutions of the brain. The under surface of the anterior lobes, optic commissure, crura cerebri and pons varolii, are the seat of exudation also. Some pus is found at the medulla oblongata. This exudation is from one to two lines in thickness. The lateral ventricles are distended with effusion, which being drawn off, pus is found at the bottom. The choroid plexus is injected. The brain shows, on section, no indurations or softening, but appears healthy.

CASE 2d.—*Cerebro-Spinal Meningitis—Effusion of Serum in Arachnoid space—Deposits of Lymph on brain and Spinal-cord.*

Private W. F. D. was admitted Jan. 19, 1865, at 10 A. M. Present condition. Pulse 80; skin moist and cool; pupils natural; restless; stares at his attendants; makes no reply to questions addressed to him; his cheeks protrude at each expiration. To have Quinia. Jan. 20th.—Pulse 98; had several actions on bowels; pupils respond to light feebly; both wrists swollen and painful to the touch; notices what is going on in the room, but seems to be unable to articulate. Continue treatment. Jan. 21st.—His mind is clearer; answers some questions rationally; for the first time, he protrudes his tongue, which is furred and red; took some nourishment; bowels acted last night; picks at his bed clothes;

has passed no urine since yesterday; one pint is drawn off. Continue treatment.

Jan. 22d.—Has been perspiring freely for several hours; delirious; head is drawn back and to the right side; has had rigors since yesterday, at intervals; no action on bowels; drew off two pints of urine; ordered head to be shaved and a blister applied; also a purgative. 8 P. M.—Pulse 140 and irregular; pupils contracted slightly; right eye drawn outwards; comatose; no action on bowels; drew off one pint of urine. Died in the early part of the night.

Autopsy, Jan. 23d. Effusion of serum in the arachnoid cavity, considerable; membranes very much injected; slight deposit of lymph between the pia mater and arachnoid, on the anterior surface of the cerebrum superiorly, extensively upon and around the optic commissure; over the entire cerebellum, crura cerebri, pons varolii, medulla oblongata and spinal cord, throughout its whole extent to the cauda equina. The nerves arising from the cord on both sides were enveloped with this deposit also. At several points along the cord it had degenerated into pus. The abdominal viscera upon examination appeared normal. The lungs were healthy also. The right side of the heart was distended with blood, and the right ventricle contained a clot of fibrin occupying half of its chamber.

CASE 3d.—Private F. G.— was admitted Feb. 3, 1865. He is suffering severe pyæmia from Calomel, which he took on his own account; his skin is yellow; complains of lassitude; pulse natural; has vomited bile several times; he is allowed to go into private quarters; to have mouth wash. Feb. 4th.—Was sent for to see patient this morning; found him suffering from pain in the frontal and temporal regions, coming on late last night; tongue swollen and ulcerated; has rigors occasionally; vomited bile during the night and this morning; no action on bowels. To have Quinis and Opium, and a cathartic. Feb. 7th.—Rested very little last night; complains of severe pain in the head; at times his mind is wandering; rises up in bed frequently and attempts to leave the room; had four actions on bowels last night; continue treatment. Feb. 8th.—Slept none during the night; has violent pain in the head; is more



rational. Continue Quinia. At 1 o'clock, P. M., was called to see patient; found him delirious; complaining much of pain in the head and along the spine, which was tender on pressure. To have cold applications to head, and blister to spine; also hot foot bath; pupils a little dilated. Feb. 9th.—Pulse still natural; skin warm; pupils dilated; bowels acted freely; passed urine; the extremities very sensitive to the touch; can't bear the weight of the bed-clothes; delirious; picks at his bed; refuses nourishment; mouth and tongue very sore. To have Anodyne to secure rest; large doses of Iodide Potass. frequently during the day; spirits of wine four times a day. Feb. 10th.—Pulse weaker; slept three hours during the night; more rational; complains of pain at the back of his neck when his head is moved. Continue treatment. Feb. 11th.—Pulse 110, and very weak; pupils sluggish; delirious during most of the night; pain in the head; he is growing weaker; unable to clear the air passages of mucus; to have spirits of wine freely. 5 o'clock, P. M. Pulse 150; sinking rapidly. Died in the early part of the night. No autopsy.

CASE 4th. *Cerebro-Spinal Meningitis.*—*Deposit of Lymph superiorly and at the base of brain.*—*Serum in the Arachnoid Cavity.*

Private W. J. H.— was admitted on the 8th Dec., 1864. History: The Surgeon of his regiment informed me that he was found in bed this morning, apparently suffering from congestive fever; the attack came on while asleep. Present condition: He is unconscious; pulse 119; pupils dilated; skin cool. To have stimulants internally and frictions with Spirits of Turpentine; also blister to head and spine. Dec. 9th.—Pulse 100, and increased in volume, but still not strong; teeth covered with sordes. Continue treatment. Dec. 10th.—Pulse 120, and feeble; skin cool; comatose. Died at 10, A. M.

Autopsy, Dec. 11th. Effusion in the arachnoid space. On the anterior surface of cerebrum superiorly, there is a deposit of adventitious membrane, also on its under surface as far back as the crura cerebri. The cerebellum below has a deposit of the characteristic greenish yellow appearance.

The prognosis in this epidemic was very unfavorable; in fact, it was regarded a death warrant to the subject. I can safely say that

notwithstanding my observations were extensive among the soldiers and negro laborers in and around Mobile, I never saw a single case recover. Indeed, we would ask, when such pathological conditions as universally presented themselves, affecting the meninges of the brain and spinal cord, are present, what other results could be expected?

In the two varieties of cases, which were observed, a treatment supposed most likely to succeed was adopted. In the one where there was much febrile excitement, antiphlogistics were used—in the other and opposite condition, a supporting plan was followed, and both alike, with unfavorable results. Quinids in large doses in previous epidemics was found to relieve a certain percentage of those attacked, but in this, it failed in doses from a scruple to a drachm. So likewise, chloride of Mercury was found to act beneficially, but here, it failed also; even after its specific effects were produced, as was exemplified in Case No. 8, where it was accidentally brought about, before the disease made its appearance.

Before pain in the head and neck, rigidity of the muscles and coma are developed, we have no diagnostic signs to justify active measures, and after they occur, effusion of lymph has taken place, and, if in a sufficient amount to suspend the functions of the brain and spinal cord, the result, it seems to me, is inevitable, and little or no good, with the present lights before us, can be expected from treatment. Yet, I have thought and still think, that in mild cases where the functions of nutrition and secretion could be performed for a sufficient length of time, though imperfectly, under a supporting plan of treatment, nature would restore a healthy condition of the cerebro-spinal centers by a breaking down and absorption of the effusion. This favorable result we meet with in pneumonia, where the lungs are the seat of the effusion. Re-absorbing from infection, this mode of treatment seems to offer most hope of favorable results.

## ARTICLE II.

*Cause, Symptoms and Treatment of Cholera.*—By J. M. JOHNSON, M. D., of Atlanta, Ga.

The appearance of Cholera upon this continent, within the past few days, excites, as it should do, the liveliest interests, not only amongst medical men, but all classes of society, from the centre to the circumference of our country. Nor is this to be wondered at, since the oldest and wisest of our "noble profession" cannot contemplate the return of the pestilence to our shores with any other feeling than that of horror and alarm.

The irresistible speed with which it strides from continent to continent, the subtlety with which it evades quarantines and sanitary regulations; traveling, with the speed of the railroad and steamship, it seeks first the crowded mart where, like the vampire, it sucks the blood unseen and unfelt; then, starting again with the moving masses that throng our thoroughfares, large and small, it ravages the whole country; and suddenly, at midnight, without warning, it smites its sleeping victims in distant towns and neighborhoods.

So mysterious are its laws, that the most earnest inquirer into etiological and pathological science has been unable to fathom them. So deadly its poison that the most powerful remedies, unless early applied, and with consummate skill, avail nothing. So sudden its attacks that the blood is dried up and the heart is sealed with the seal of death ere the approach of danger is realized. Learned observers have declared it contagious; equally learned observers have proclaimed it non-contagious. The public judgment staggers beneath the load of conflicting theories; and before any of them assumes the dignity of settled belief, the foundations are swept away, the superstructures fall, and disappointment and uncertainty are all that remains. What is to be done in such an emergency as this? Shall we give up for lost the whole question of the pathology and treatment of cholera? Must we acknowledge ourselves vanquished, and proclaim with the red man, "It is not cholera, it is death."

Its history, until within the present century, is unrecorded.

Since our day it has visited every part of the globe, except perhaps the frozen zone. It raged in Russia in the winter of 1830-31, during the coldest weather known for near a quarter of a century, and tens of thousands fell victims to it. It prevailed also in the tropics, and in the temperate latitudes with equal severity two years later. It is not bounded by seas—adheres to no geographical lines—from a common centre it moves east, west, north or south, or all at once, but invariably follows the great commercial lines of the world, turning to the right or left to follow a railroad or navigable river, or even a stage line; it penetrates remote villages and settlements, bringing consternation, sorrow, and death amongst the primitive and humble.

Its attacks are those of a consummate general. Heat and cold, summer and winter, wet or dry weather, all the agents of disease are its allies. The secrets of the constitution are found out, the salients, if not rendered impregnable by courage, temperance and prudence, are successfully assailed, and the citadel falls. The poor are its sweetest victims, being badly housed, and badly fed and clothed, and without the means or judgment to provide for their safety. Scarcely one found in the track of the pestilence escapes it, and more than three-fourths perish. If I were asked for the best sanitary means for this city, in view of the near approach of cholera, I would answer unhesitatingly look first to the condition of the poor—see that their dwellings, in addition to being clean, are properly ventilated and lighted—fresh air and sun-light are indispensable—furnish them wholesome food, by a public tax if necessary, and compel them, by proper penalties, to observe strictly the hygienic and sanitary rules laid down for their government. I would shut up all the beer and liquor shops, forbid exposure to night air, or the use of green corn, cabbages, cucumbers, melons, radishes, etc., etc.; compel the use of good clean water, and I would prohibit town meetings, picnics, etc., from the well-known fact that masses are here, where the cholera atmosphere exists, to breed the disease, whilst individuals who keep away can scarcely be considered liable to it.

I would see that the streets, and wells, and sewers, and privies, and stables were thoroughly cleansed out, and that the cholera of

lime was freely used every day, on every lot in the city, that was inhabited.

Cholera is a disease which destroys the homogeneity of the blood. Whatever may be the cause, the effect at least is known. It is not inflammation, nor yet is it a fever—it is *cholera*. The vomiting, and purging, and cramps, are symptoms only. The circulating mass is the seat of the trouble, no matter what its cause. The patient may have had no premonition of the approach of the disease—he has perhaps labored, and eaten, and slept as usual, but at mid-night he is aroused from his slumbers with an irrepressible vomiting and purging. The first effort empties both the stomach and bowels of their contents. In a few minutes both vomiting and purging is renewed, and rice water discharges begin. This is serum, the watery part of the blood; as fast as it is thrown out, the absorbents take up from the surrounding tissues an additional supply, which on the instant is thrown off as effete matter.

This process of accumulation and waste goes on from two or three to a dozen hours—just in proportion to the violence of the symptoms, and culminates in the total exhaustion of the last drop in the system. The circulating vessels contain nothing but glairy tenacious clots glued to their walls, or rather gluing their walls together, the full round muscles of a man, in the vigor of manhood are reduced to a mere tendinous sheath adhering closely to the bones. The skin and areolar substance in like manner drained of the last drop of fluid, adheres to the shrunken attenuated muscles as closely as if drawn there by main strength. The brain, all the cavities of the skull, the eye balls, the spinal cord, glands, in short, every fibre and tissue is wasted, and contracted to an extent utterly incredible, and beyond the power of belief, and this not unfrequently occurs in less time than it takes to eat a fashionable dinner.

I first saw and treated the cholera in New Orleans, in 1833. In June of that year I left the city to return to Kentucky. Two gentlemen from Louisville occupied the state room immediately in front of me. We retired to bed at mid-night, all in perfect health so far as known. I awoke at six o'clock next morning, and Mr. Semple, one of the gentlemen named, had been dead some time,

was shrouded and laid out, and his friend was dying—ten deaths occurred that night, the first after leaving port, and none lingered longer than six or seven hours.

I have not attempted to give the etiology of cholera, nor will I. There are secrets in Heaven, and all nature abounds in them. Man has been endowed with wonderful capacities, and the great law of his being is to move forward. Not content with what is known, he must pass on to new fields of discovery, calling into requisition every faculty. Divine Providence has vouchsafed him. Yet unappalled by the difficulties which the subject presents, and I trust without ostentation, I approach the great pathological questions. "What is cholera?" What part of the complete organism is involved? and what the true indications of cure?

Cholera is a scourge. Like other epidemics, it is a minister of the destroying angel, turned loose to "haze the world for a season." In vain have theorists speculated upon its origin and cause; one after another these well-built up fabrics have had to yield to the logic of events, and gave place to new data and new facts. And yet the true pathologist moves on with tireless zeal and end-  
less hope. There is a living irrepressible sentiment, the very heroism of courage, that takes him to the call of the dying convict, and the infectious hovels of the poor, defying obstacles and danger, and even death; his errand is one of discovery. Philosophy whose shield is truth, accompanies him; Science lends the light of centuries; Etiology and Pathology cast their treasures at his feet; Fame stands ready with scroll in hand to record the grand discovery, the cause of cholera. After rising step by step, higher and higher, from plane to plane, every law and every principle that the human mind can comprehend, has been brought into requisition, the problem remains unsolved; one word records the result—undiscovered.

I have intimated elsewhere that cholera was a blood disintegrating disease. Certainly it cannot be denied that the only traceable primary lesion is in the circulating mass. It will not do to attempt to account for cholera upon the hypothesis of irritation in the intestinal canal; this being nothing more than a symptom. We must look beyond this for the intrinsic cause.

Having said that cholera was a lesion of the blood, I will give my reasons very briefly for this opinion. The universality of certain agents will be admitted by all. The atmosphere is the same everywhere, and liable to the same temporary changes every where. The earth being the home of electricity, it is alike all pervading. And whilst we know but little comparatively, of this extraordinary agent, enough is known to prove its power in the production and perfection of life. Whilst we would hardly be warranted in saying it is the vital principle, few who have investigated the subject would dare to say it is not. It courses through the brain and nervous trunks, unseen and unfelt, imparting health and vigor to the constitution, and courage and will, and manhood to the character, in proportion as the amount is large and harmonious, or cowardice and servility, where it is small. The former attain the greatest longevity, originate and carry forward all great enterprises, head armies, establish kingdoms, and set up kings. They abound in every department of life and business; with diversity of tastes and pursuits, but the same success attends them. From the centre of the scale, between the highest and lowest, upward and downward, there is a marked difference in character. From the middle upward you have the men who are the soul of the social state, who control society, and subordinate its members to their proper avocations and pursuits. Below this you have a restless, disturbed element, incapable of organizing themselves into communities, that mutual benefit, progress and happiness may result. Wisely, therefore, society is made up of all classes; the weak to be protected by the strong, the bad to be kept in check by laws founded on great moral truths, the guilty punished, that virtue may be vindicated, etc. The first class are not liable to contract disease, except as the consequence of willfully wasting the powers of the constitution—their intuitions leading them to just conclusions as to the place and mode of safety. But it is very different with the other class; they readily take on all the forms of disease, and it is with them that the harvest of death begins and ends. With this class fear predominates, and unreasoning alarm and panic follow.

If this view is tenable, will it be illogical to conclude that one chief extrinsic cause of cholera is panic? Cholera is acute diarrhoea with

congestion. But waiving for the present both its extrinsic and intrinsic causes, let us turn our attention to the people and country from whence it comes, in its malignant and epidemic form. Its history is that it originates amongst the pilgrims of the east, while visiting in great numbers their sacred places for the performance of certain religious rites, and in fulfilment of certain vows. It is asserted that they are ignorant, superstitious, filthy and destitute in the last degree. Thousands perish from hunger, fatigue and exposure, as well as from disease. What disease so likely to prevail, under the circumstances, as acute diarrhoea? My experience while connected with the army, proves that the collection of men into large masses, especially those from rural life, even under the favorable aspect of comfortable quarters and good food, brought on nearly all forms of disease, but especially acute diarrhoea. Reasoning *a priori*, the degraded masses of the eastern world, where the epidemic originates, would be equally liable to it, to say the least, but without our hygienic and sanitary means, or skillful medical advisers to cure and arrest the progress of the epidemic. The history of cholera further proves that none regard it with more alarm than do the people of India. A panic prevails throughout the country as soon as the appearance of the pestilence is known. Need I introduce proof to shew that enlightened Europe and America regard it in a no less serious light?

If, therefore, panic is an extrinsic cause of cholera, and the intrinsic cause functional disorder of the nerves and lesion of the blood, what is the essential bodily change pathognomic of cholera? I think myself justified in assuming that cholera begins in the cerebrum pneumogastric, and great sympathetic ganglia. The great tri-splanchnic filaments being nerves of sensation, and distributed as they are through the three great cavities, their functions, no less than their influence, is all pervading. Under the influence of cholera panic, their functions are either partially or wholly withdrawn, the will is disturbed, the appetite fails, the breathing is constricted, the heart's energy is impaired, the blood accumulates in the veins, the stomach and bowels become irritable, and a feeling of helpless exhaustion sets in, the nutritive functions are suspended, and chyle and lymph no longer supply nourishment to the



blood. These are some of the phenomena attendant upon partial suspension of nervous function. If there is total suspension, attended with reflex action of these nerves back upon their centres, the symptoms will be greatly intensified and the result more rapidly, and more certainly fatal.

The reader will please bear in mind that I am only discussing the question with reference to its bearing upon the subject, of the intrinsic cause of cholera, and not the general result of the disturbance of the functions of these nerves as they appear in every day practice. I know we can trace syncope, chorea convulsions, hemiplegia, hysteria, etc., etc., to a like cause, but not generally from a like cause.

We turn now to the morbid changes wrought upon the circulating mass. There are living active poisons enough in the system to cause death at any time, but for the rapid and ever-flowing current, which ceaselessly performs its circuit, and throws off by the lungs, liver, etc., all such noxious accumulations. But suspend its functions, even for a few minutes, clots form in the heart, and great venous trunks, and death follows. If the breathing is only partially suspended, carbon accumulates in the blood and acts as an irritant poison. It is therefore capable of demonstration that there are poisons locked up in the system, capable of destroying it, if only one function is disturbed. If, in addition, you have partial cerebral syncope, generally present in instances of panic, or any other excessive emotional cause, by which the nutritive functions are impaired or cut off entirely, the breathing disturbed, and the emotional nerves having ceased their functions, there will be increased action of the pneumogastric and great sympathetic, to be followed most likely by reflex action back upon their centres, and thus disturbing the whole system of nerves, and by this means, every function of the body.

The particular cause that disturbs the homogeneity of the blood is difficult to trace. Autopsy discloses the fact that the arteries are empty, and that inspissated fibrinous lymph fills up the minute veins, and thereby prevents the return of the blood to the arteries. All of the veins are found to contain this substance. The nervous trunks appear to have suddenly ceased their functions, but present

no other changes, except loss of fluid. The stomach, bowels and liver show scarcely any traces of inflammation. The cause of death is the loss of the watery part of the blood; the blood must therefore be the objective point.

*Treatment.*—The earlier symptoms, known by the designation of cholera, is simply a lax; at this stage, but little treatment is required. The patient should be placed in bed, his feet bathed in hot water. He should take a cup of hot tea, or hot brandy toddy, with 30 drops of laudanum, to be repeated every time the bowels are moved. Also sulphuric acid, one part, water, twenty parts; of this, one teaspoonful every hour. Mustard should be placed over the stomach and bowels, and also over the chest. A liniment composed of equal parts of aqua ammonia, camphor, turpentine and sweet oil, should be applied to the spine every hour or two, as hot as it can be borne. This should be applied with a flannel cloth, and with as much force as can be borne, without rubbing the skin off. When the purging ceases, if the skin is warm and the pulse full, the remedies may be discontinued, but the patient must remain in bed, from two to six days, and the diet should be the most simple and nourishing, the quantity for the first day or two almost infinitesimal: coffee, tea, fresh boiled milk, chicken tea, buff tea, etc., etc.

A vast majority of cases, taken in the incipient or premonitory stage, will be radically cured by this treatment alone. Quiet has much to do with the recovery of such cases, and cannot be too strongly enjoined. I have seen many cases after they were apparently cured, leave their beds, relapse and die in a few hours. A relapse is almost certain death. Opium and stimulants should be discontinued as soon as possible; the sulphuric acid may be continued longer. Brandy and opium will have to be administered throughout the active symptoms, but great care must be taken to avoid the bad effects of both. I have seen many patients die, after cholera had been arrested, from congestion of the brain, superinduced by these remedies. From a teaspoonful to a tablespoonful of brandy every fifteen or thirty minutes is enough, and from twenty to forty drops of laudanum, or one or two grains of opium every hour, will generally meet the indications.

In the second stage of cholera, where you have the rice water discharges, add to the brandy and water two and a half grains of carb. of ammonia, to each portion of brandy and laudanum, and continue applications to the spine, and mustard to the bowels and give the following pill:

R Calomel, grs. x.  
Quinine, " xx.  
Make pills, vi.

Give one every hour. If there are cramps, and the symptoms continue to intensify, discontinue the laudanum from the mixture of brandy and ammonia, and give the following:

R Chloroform, 3 ii.  
Laudanum, 3 ii.  
Sulph. Ether, 5 ii.  
Spts. Camphor, 3 ii.  
Mucilage Gum Arabic, 3 ii.  
Mix.

Give one teaspoonful every ten, twenty or thirty minutes, and if necessary, double, or triple the portion. Also, use the following injection:

R Nitrate Silver, grs. x.  
Aqua Distillae, 3 i.

Throw this up the bowels by means of a flexible tube, as far as it can be passed, and repeat it every time the bowels are evacuated.

The patient must be inspired with confidence. Brandy must be used to restore the cerebral functions; frictions over the spine, to act upon the great cerebro-spinal centre, for the restoration of functions of the pneumogastric and sympathetic nerves; mustard to the chest, to stimulate the minute nerves and capillaries, and excite muscular action to restore the breathing—to the stomach because it is the centre of vital action, and revulsives assist powerfully in the restoration of its functions, and over the heart, liver and bowels, for the same reason; and all at once because the larger the surface covered, the more certain and speedy the reaction.

In addition to giving carb. ammonia as a stimulant, it is very generally admitted to be the agent by which the fluidity of the blood is maintained. Is it not probable that its influence is exerted

upon the fibrinous lymph, by which the union of the different elements are perfected and kept up?

Allow me to say, in conclusion, that I have seen a great deal of cholera, first in 1833, in New Orleans, then in Kentucky, in 1849, and again in 1853-4. The plan of treatment given above was not adopted by me until the last visitation of cholera, in 1853, and again in the spring and summer of 1854. It was suggested by a conversation with Dr. John Berry, of Uniontown, Ky., a man of talent and experience—nor did I lose a patient after I adopted it.

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*Extracts from the Minutes of Atlanta Medical Society.*

ATLANTA, April 24, 1866.

Reports of Cases being called for—

DR. CONNALLY.—A case of doubtful diagnosis; supposed to be menengitis—perhaps cerebro-spinal menengitis. Survived only about 50 hours after the attack. When first seen, presented no alarming symptom. Had suffered very much from pain in head, but at the time of visit was distressed with nausea and vomiting. Had two copious evacuations during the day; tongue very slightly red; no tenderness of epigastrium. In a few hours drowsiness and slight delirium were manifested, and in this condition died suddenly.

DR. O'KEEFE.—Pulmonary disease; of which he gave the following history and opinions connected with this subject:

April 14th, 1866. Mrs. D., aged 50, a widow lady for 28 years, the mother of one child, and daughter of a Methodist minister; married at the age of 21, and in one year thereafter was delivered of her first and only child. Had good health until three years after her marriage, when she suffered from her first attack of hemoptysis, (a profuse one,) now 26 years ago, of which she has had a repetition as often perhaps as a dozen times—has had a cough more or less constantly since that time. Her menstrual functions were regu-

larly performed until the 43d year of her age, then became somewhat deranged for three years, and finally ceased. During the latter three years the hemoptysis was sometimes vicarious of the menstrual discharge, and the pulmonary symptoms have been more persistent and troublesome since the cessation of the catamenia. There is no hereditary tendency to tuberculous disease in any branch of her family, so far as she is informed, (and she is an intelligent lady) except that her mother had pulmonary symptoms for nine years before her death.

*Present Condition.*—General condition feeble—not much emaciation, though she does not weigh quite as much as she has at former periods of her life; pulse feeble and somewhat accelerated; appetite good; cough frequent, paroxysmal and troublesome; respiration short and quick; expectoration very abundant at times, opaque and thick. At times there is an aggravation of all the pulmonary symptoms, cough, dyspnoea, etc., attended with a febrile condition, which confines her to bed.

*Physical Signs.*—Inspection of the thorax reveals no alteration of its normal contour; both sides are perfectly symmetrical. In all parts of the left lung, the percussion sound, vocal resonance and respiratory murmur are normal, except that the latter is puerile, indicating simply an increased function of the organ—that is to say, the left lung is perfectly healthy. In the right lung there is a shade of dullness, more marked over the middle lobe anteriorly, than elsewhere, and this is all the evidence of disease that percussion affords. Auscultation reveals slightly increased vocal resonance, prolonged expiration and imperfectly developed sonorous and sibilant rales under the clavicle; over the balance of the lung anteriorly, laterally and posteriorly, are heard sonorous, sibilant and mucus rales, (the last at the base of the lung posteriorly) variously blended and in various proportions, with bronchial respiration anteriorly. Nothing abnormal in the cardiac region. There was a moderate degree of follicular disease of the posterior wall of the pharynx.

**DIAGNOSIS:** What shall this be? What shall we call it? Was it or was it not a case of tubercular phthisis? Taking the history and rational symptoms of the case, the conclusion would almost

inevitably be reached that it was phthisis pulmonalis ; thus, hemorrhage from the lungs frequently for 26 years ; cough more or less constantly for the same period ; expectoration of muco-purulent matter abundant ; general debility ; pulse feeble and somewhat accelerated, and to cap the climax, her mother had died of pulmonary disease of nine years standing, which, in all probability, was consumption. Now did we not go beyond the history, constitutional and rational symptoms, the case would at once be set down as phthisis. Take the single item of hemoptysis so often repeated for so long a time, and according to our best authorities the diagnosis would be "tuberculosis." I have heard a distinguished authority on this subject, (Prof. Alonzo Clark, of New York city,) announce *ex cathedra*, that he had never found this symptom unassociated with tuberculous deposit in the lungs. Another authority equally distinguished in this department of practical medicine, Prof. Swett, in his work on diseases of the chest, says: "In certain forms of heart disease, in gangren of the lungs, in cancer, in cirrhosis of the lungs, and perhaps occasionally in women, as a form of vicarious menstruation, you may find hemoptysis. But these cases, in addition to their peculiar attendant symptoms, are so rarely met, while hemoptysis from tuberculous disease is so common, that its occurrence will naturally bring with it the presumption that, when hemoptysis exists, tubercles in the lungs exist." Again says the same author: "Cases of simple pulmonary congestion followed by hemorrhage, and by a return of the lung to a healthy condition, have never occurred to me." If we consult any other authority on this point, Northern or European, their testimony is singularly unanimous in attaching a formidable importance to this symptom, in its relation to the existence of pulmonary tubercles.

I have prominently singled out this symptom, Mr. President, for the purpose of expressing my humble opinion, that in this climate, so far as my limited observation extends, we are not authorized to attach to it the same fearful import as the authorities just quoted. While it is quite true that hemoptysis is often, alas ! too often, the precursor of the early inevitable doom of the subject of it, still it is equally true, according to my observation, that the history of

cases is, not unfrequently, presented to us in which this symptom has repeatedly occurred in early life in connection with other pulmonary symptoms, all of which have disappeared, and the parties have been restored to a good degree of health and lived to middle or advanced life, finally dying of some disease having no connection with the lungs. Now what does the history of such cases teach us? Shall we infer that the hemorrhage depends upon simple congestion of the lungs unconnected with the deposit of tubercles, or shall we conclude that it owes its existence to a tuberculous deposit which has been absorbed, restoring the integrity of the lung, or become dormant and innocuous by its transformation into cretaceous or carbonaceous matter? The weight of authority is largely in favor of the latter opinion, and having no pathological facts to oppose to it, I adopt it as the most reasonable explanation of the problem. The existence of these chalky concretions, sometimes associated with cicatrices, and more frequently not, at the summit of the lungs, is much more frequent than was formerly supposed, and such cases are, in my opinion, justly regarded as examples of cured consumption. Some interesting facts have been developed in the investigation of this question. In one hundred women who died above sixty years of age of various diseases, in the Salpêtrière Hospital of Paris, "fifty one presented the curative indications of tuberculous disease, and chiefly by the formation of chalky concretions." Prof. J. Hughes Burnett has investigated this point by a number of autopsies of persons dying of different diseases, with the result that about one half presented evidences of having had the tuberculous deposit at some period of their lives. That unusually cautious and reliable observer, Prof. Swett, says: "I have known a number of patients during the last fifteen years, who have had the evidences of phthisis, and sometimes in an advanced stage, who finally recovered, and are now in the enjoyment of good health. \* \* \* \* What light does post mortem examination throw upon this subject? For the past fifteen years, I have been in the habit of examining the lungs of all my patients dying of every form of disease, independent of phthisis, for the traces of phthisis that has been cured. I have been astonished at the number of cases which have presented evidences of this favorable

result. I can say that it is not uncommon to find in patients who have died of various diseases, and in which no suspicion of tuberculous disease existed at the time of death, cretaceous masses, few in number, at the summit of the lungs, and sometimes, but more rarely, cicatrices in the same situation, and commonly existing with these cretaceous masses. \* \* \* \* \* This result did not surprise me, as it would have done many of the profession, who believe that tubercles are equivalent to a death warrant. Indeed, I am inclined to think that as the diagnosis of tubercles has become more certain and satisfactory, many cases will be found presenting undoubted evidences of phthisis, which yet recover, and that the common expression, 'The patient could not have had phthisis, because he recovered,' will cease to be believed."

Supposing, then, the case to be phthisis and that these hemorrhages depended upon the tuberculous deposit, we have a case of chronic phthisis. It would then be pertinent to inquire, can consumption last twenty six years? Can this usually formidable disease exist so long without the destruction of the patient? We are justified, in my opinion, by our best authorities, in answering this question in the affirmative. Swett witnessed a case of phthisis which lasted thirty-five years, which was marked by occasional returns of, sometimes, very copious hemorrhage during this long period, and examples could be multiplied indefinitely on this point. The pathological process in a case of chronic or *intermittent* tuberculosis would run about in this wise. A crop of tuberculous exudation takes place in the lungs, congestion is excited thereby which nature attempts to relieve by the rupture of some of the capillary vessels and hence the hemorrhage. We would therefore deduce the practical rule that the influence of the hemoptysis, if moderate, is salutary, and that we need not trouble ourselves to devise remedies for its suppression. Sometimes, however, the hemorrhage is profuse and may endanger life. I have seen one case in which it was the immediate cause of death by asphyxia. Under such circumstances, the blood comes from a vessel of considerable size, which has been destroyed by the tuberculous ulceration which belongs to the third stage of phthisis. This result, however, that is fatal hemoptysis, is extremely rare in my opinion; and another part



worthy of consideration is, as a rule, that a consumptive patient with hemoptysis will live longer than one without it; that the process of tuberculization, with its destructive results, is more rapid in that class who have no hemorrhages. It was formerly supposed that hemorrhages from the lungs owed their origin to two conditions, viz: exhalation from a free surface, as the bronchial mucus membrane and rupture of a blood-vessel; microscopical observations, however, have demonstrated that there can be no such thing as an exhalation of blood—that it must always escape from a ruptured blood-vessel. "Its mechanism is simply this: The tuberculous deposit, by pressing upon the capillary vessels of the lungs, obstructs some of these, while others become congested in consequence. These congested vessels, when seated in a mucus tissue, become ruptured with distention, and discharge blood."

But to return to our case. Is it chronic phthisis? The physical signs scarcely establish this opinion. Let us recur to them: Slightly increased vocal resonance, prolonged expiration, sonorous, sibilant and mucus rales, bronchial respiration, with only a *shade* of dullness in a case of 26 years duration, and these signs existed at the middle and base of the lung, as well as its summit. It is well known that a change of the normal percussion sound is one of the most reliable evidences of an established case of phthisis—indeed that a deposit of any extent cannot exist—unless it be of the diffused miliary tuberculous exudation in the interior of the lung, without producing more or less dullness on percussion. There was but a shade of dullness, scarcely worth mentioning, except for the purpose of accuracy—and it seems to me that if the physical evidences of disease which existed in the lung from summit to base were due to a deposit of tuberculous matter—this condition having existed to a greater or less extent for so long a time—we certainly should have a well marked change in the percussion sound.

I am compelled to believe, therefore, after a careful scrutiny of the case in all its bearings, that its main pathological element is chronic bronchitis with dilatation of the bronchial tubes. This view of the case affords, to my mind, a more satisfactory explanation of all the phenomena than any other. Even hemorrhage has been reported as connected with this condition.

In conclusion, Mr. President, I believe that phthisis, although a fatal disease in a large proportion of cases, is yet curable in some; and that the developments of recent pathological investigation tend to show that it has been cured much more frequently than was formerly thought possible. If the chalky concretions and cicatrices found in the lungs of persons who have died of various diseases be regarded as evidences of cured tubercles, then it would seem that about one half of all that die in advanced life have had the tuberculous deposit at some period of their lives. I believe that as the diagnosis of tubercle becomes more certain and satisfactory, enabling us to recognize the disease in its incipient stage, and justifying us in putting the patient on his guard in regard to his condition, the proportion of cures will be increased, and as has been already said, consumption will cease to be regarded as a death warrant. Just here I would advert to a usage which, to my mind, is full of evil. A man suffers an attack of hemoptysis, his friends and very often, his medical attendant, endeavor to convince him (which is by no means a difficult matter,) that the blood is from his throat, gums, etc., etc., that it is a mere accidental thing and means nothing. This, in my opinion, is all wrong. Hemoptysis has, usually, a fearful import, and the unfortunate victim should be warned of his danger; his habits, occupation and general mode of life should conform to his condition; he should be informed of the serious character of the disease impending over him, which may be averted by proper action on his part. While acting in this fair and candid manner, I should at the same time, assure him that his condition was by no means a hopeless one, indeed, that there was much of hope in it if a timely and proper course be taken by himself. Another evil of equal magnitude is the injudicious use of drugs in these cases. The whole class of nostrums and patent medicines is gone over; every old woman has a remedy that cured just such a case, and alas, even the medical man is sometimes so illy informed as to the true nature and character of his patient's malady, that his digestive functions are almost totally destroyed by mercurials, opiates, nauseants and expectorants.

Rather than submit to this abominable system of drugging, I

would turn the consumptive loose and advise him to lead the life of the savage; to take the rain and wind and frost and snow, and all manner of exposure in the open air. Several years ago I met an intelligent gentleman in Greene county, in this State, who was the traveling agent of several Northern periodicals. He gave me the following history of his health, which I have every reason to believe was strictly correct: He had been a merchant in New York city and lost his health by pulmonary disease, which his physicians pronounced phthisis. The disease progressed until he became bed-ridden, and a tuberculous cavity had formed in the apex of one of his lungs. At this stage of his case, he had hectic, night sweats, and was so feeble that he could scarcely get out of bed. He was informed by his friends and his medical attendants, that his living was a mere question of time. He determined to make a powerful effort for his life, and, in his quaint language, "to die game if possible." He procured a horse, and secured the agency for a few periodicals, merely to afford him an object for traveling, got out of bed, and left the city on horse-back in the fall, with his face Southwards. He rode but a very short distance the first day, a little more the next, and so on, increasing the distance from day to day. On he rode through New Jersey, Pennsylvania, Maryland, Virginia, North Carolina, South Carolina, Georgia and Florida: and as he progressed, he gained in strength and distance travelled every day, until his arrival in Florida, he felt like a new man.

In all this journey, he made a point never to stop at hotels, or taverns, or any other pretentious establishments, but selected, when practicable, the plain, rude farm house—very often the log cabin—where he was sure to get pure air, a clean bed, and simple fare. He groomed his own horse, blacked his own boots, and performed all kinds of drudgery that came in his way, and seldom stopped, even in inclement weather. He spent the winter traveling in the South, mostly in Florida, and returned to New York the following summer, his health being almost restored. His cough had entirely left him, his strength and flesh had returned, and he was in all respects a cured man. His physicians examined his chest, and found that the evidences of the tuberculous cavity had disappeared, and that a cicatrix had taken its place. Eight years

had elapsed from the time of the commencement of this history, and its recital to me, all of which he spent in the manner described, spending the summers North and the winters South, but always on horseback in the open air, and in the country. At the time I saw him he seemed to be in excellent health and buoyant spirits, and was altogether, a well-informed companionable gentleman. For several years after this interview, he made me an annual visit on his journey southward, and was still enjoying good health.

Several years ago, it was alleged that the high latitudes of the North-west—Minnesota for example—with their dry atmosphere, and uniformly cold temperature, were more favorable as winter or summer residences for consumptives than the Southern States. My friend tried Minnesota, but could not live there.

Dr. Graves, of Dublin, I think it is, who reported a case of this kind in the journals a few years ago. I quote it from memory, but think the facts are substantially correct. A gentleman from the country brought his son, a young man 20 to 25 years of age, to Dublin, to be examined by Dr. G. The result of this examination proved that he had a tuberculous deposit in a softening condition in the apex of one of his lungs; i. e. that he was in the second stage of phthisis. The diagnosis was frankly communicated to the father, but not to the patient, (as was then thought,) with its probable consequence in due course of time. Dr. Graves saw nor thought no more of the case for about one year, when a young man of vigorous and robust health called on him. He remarked, "You do not recognize me, Doctor?" "No, sir." "I am the young man brought to you by my father, (giving his name,) about a year ago; you see I am well." The Dr. could scarcely believe his senses, but becoming satisfied of his identity, examined his lungs and found that all traces of disease had disappeared. He asked him what he had done, how he had lived, and how he got cured. His patient replied that he had overheard the diagnosis as communicated to his father, and having, as he supposed, but a short time to live, he would live it fast and make the most of it. He hunted and fished in the bogs and swamps of Ireland every day through the winter, frequently in water waist high, from morning to night; he paid no attention to weather, and lived literally a

fast life. To an inquiry of the Dr. if he had drank any, he replied that he had scarcely went to bed sober. Should our consumptive patients commence, at the very incipency of the disease, some such mode of life as that sketched in these two cases, I verily believe that its mortality would be greatly diminished, and our profession relieved from the stigma which now attaches to it.

DR. WORD presented a specimen of *tape worm*, (*Tenia Solium*,) 8 feet long. The patient from whom he obtained it, was a child 5 or 6 years old, and had been afflicted for 3 years past with this parasite, occasionally discharging fragments of the worm. The case had been under Dr. Word's charge since August last, during which time frequent efforts had been made to dislodge the worm. *Kosso*, *male fern*, *Turpentine* and other approved remedies had been tried without avail. Better success had attended the use of common *Alum* in this case than any other remedy; from this remedy portions of the worm had been discharged at different times. 20 grs. of alum in solution, given 2 times a day, never failed to relieve the distressing symptoms of the case, yet it was only when the *alum* was given in conjunction with melted lard that any portion of the worm was discharged. 20 grs. of the alum with an ounce of lard, acted powerfully as a purgative, and seldom failed to bring away portions of the worm. Dr. Word expressed the opinion that *alum* was a much more valuable article of the *materia medica* than is commonly supposed. He had observed that it possessed the power of controlling the heart's action in a marked degree. A solution of 1  $\frac{3}{4}$  in a glass of water, and given in doses of a tablespoonful every half hour, controled the most active palpitations of the heart, whether resulting from functional or organic cause. He had not yet tested satisfactorily in practice, his views upon this point, but had strong hopes, that though comparatively a harmless and innocent article, it would prove to be an *arterial sedative* of as great power as *veratrum viride*.

## SELECTIONS.

*Chloroform as an Internal Remedy.* By A. P. MERRILL, M. D.,  
New York City.

At the last Commencement of the Bellevue Hospital Medical College, the chosen orator of the occasion, who announced himself as neither an allopath nor a homœopath, neither heroic nor expectant, but only a lawyer, made the startling suggestion, that the three learned Professions are daily lessening their importance, by the liberal and enlightened course of their instructions. As the celebrated teacher, Fenelon, by his skillful instruction of the Dauphin, made his services unnecessary to the King, so do the most skillful theological, legal and medical teachers of the present day, in some degree, supersede the necessity of their future labors, by enlightening mankind in regard to all the practical principles of their several branches of learning. But whatever may be true in regard to theology and law, it cannot be doubted that medical men are slow to believe that the value of their services is ever to be thus lessened, much less dispensed with. Yet there is abundant reason to believe that the tendency of all liberal instruction in medicine is, to inform the masses of mankind in regard to what have been hidden secrets of Professional knowledge, and so to shape the practice of the healing art, as to bring it somewhat largely within the comprehension of the non-professional.

Under the influence of liberal-minded men, anatomy, physiology and chemistry have become common studies of the rising generation in our country, and children in our public schools are permitted to imbibe the facts and principles of natural science in the art of learning to read. Teachers of youth are no longer content with the fictions of nursery tales, and it is by no means uncommon to meet with both men and women, in all the walks of life, who are familiar at once with the nomenclature and leading principles of practical medicine. Nor is the apprehension, now entertained by well-informed Physicians just, that such knowledge will tend to the increase of charlatanry. On the contrary, it is virtually confessed that the better the mysteries and complexities of structure and function in the human system are understood, the less likely will people be to rely upon intuitive skill and superstitious observances,

in the treatment of disease. The common sense and common judgment of men, are of scarcely less value in Medicine than in Law and Divinity; and the exclusive and learned charlatanry of each of those learned Professions is to be equally condemned. The single step from the sublime to the ridiculous is not shorter and easier, than that from the complex mysteries of polypharmacy, and the pedantic technicalities of the old school of Medicine, to the simple secrets of the nostrum venders of modern times.

There was a time, not very long ago, when medical prescriptions claimed the confidence of men, by virtue of the multiplicity of their ingredients, and the mysterious characters in which they were written, while the uninitiated were kept in equal ignorance of the nature of the malady and the means of cure; but the introduction of more liberal views, not only simplified all combinations, but by lessening the distance between Physician and patient, induced the latter to expect that his condition will be made known to him, as well as the means provided for relief. The popular knowledge of the most valuable remedies in use is due to the introduction of this more liberal system of medical practice; and all observation proves that men are more likely to require the advice of skillful Physicians than before. As every Doctor, notwithstanding his own knowledge of Medicine, appeals, when attacked by disease, to his neighboring Doctor for advice, so the well-informed non-professional man calls the best skill to his aid, whenever he needs opium, bark or mercury, although he can be taught nothing new as to the remedied qualities of these medicines.

Now, what has become true, under these liberal teachings of the Profession, of bark, opium and mercury, I would have true also of chloroform, as an internal remedy. But in regard to this, we have to contend with preconceived and erroneous notions of its poisonous qualities. These notions, wholly unfounded, have been fostered and encouraged by all classes of people, and have been sanctioned by legislative action, even to the extent of forbidding the sale of any quantity of chloroform, except upon the prescription of a Physician; and when so sold, it must be labelled *poison*, although it is the least poisonous of all the active remedies in use. But we may hope that in the enlightened era the public mind may be disabused of such prejudice, in somewhat less time than it was of a similar prejudice, in regard to Peruvian bark.

Physicians will readily understand something of the value of chloroform when they come to be aware of its power in the chill of fever, and all kindred affections. A remedy which will relieve chill with its concomitant congestions, more or less severe, and that so effectually as to prevent febrile reaction, may be held to

possess a power over certain forms of disease, which has been accorded to no other, and to promise results which the most sanguine had never expected to accomplish by medical treatment. The discovery of cinchona and its alkaloids and salts, opened a new era in the practice of the healing art, which is familiar to the human mind throughout the world. The non-professional everywhere have learned the uses of these remedies in the prevention of chill. Everybody is supposed to know that if the life of the patient can be preserved through the chill of fever, and a general reaction established as its natural sequence, there is reason to hope for such a remission of the disease as will justify a reliance upon quinia to prevent its return. This is a great boon to mankind, which could not long remain in obscurity, and the human race has profited by it. But we have a remedy in chloroform more simple, safe and easy of administration, which, striking at the root of the matter, is capable, by a single harmless dose, which any one may administer, of curing the chill itself!

In certain localities where periodic fever prevails in its gravest forms, and especially in subjects with whom the periodic movement has become habitual, it is probable that the disease may not always be eradicated by a single dose of chloroform, although the chill, and the congestions attending upon it, be decidedly relieved. In malarial districts the intensity and persistency of this periodic movement, have often been such as to withstand, for a long while, the most approved antiperiodic treatment, and it is reasonable to expect that under such circumstances preventive measures may become necessary, and even that a return of the chill may demand a repetition of the chloroform treatment. But in several cases in the adult subject, I have found the one hypnotic dose of chloroform sufficient to effect a cure; and I have good reason to believe that in a large majority of cases of infantile convulsions, the single effective dose is all the child requires, although I have often followed it with quinine as a precautionary measure. But in none of these cases has the disease returned, except in one instance, on the thirty-fifth day, whether the quinine was given or not.

It is now nearly fourteen years since I first ventured to pour a teaspoonful of chloroform into the mouth of a child dying of convulsion from chill. The feebleness of the child's constitution, and the long continuance of the convulsion had caused such prostration as to afford little hope of any relief; but the child slept, recovered its pulse and warmth and awoke in apparent health. It had no return of the disease, and from that time to the present I have not failed in any similar case, to accomplish the same result by the same simple means. Sometimes I have succeeded with



larger, and sometimes with smaller doses, and in a few cases of great severity, and with the vital powers much exhausted, I have given chloroform by enema, as well as by the mouth, and always continued it until sleep was produced. This being secured, spasmodic action has always ceased, and recuperation begun. Indeed, as soon as the eye-lids are closed the child may be considered safe, and only needs to be permitted to sleep quietly as long as it will.

In a notice of my publication on this subject, a Medical journal remarks that "the convulsions of children are rarely fatal," and in a monograph recently published in this city, it is stated in reference to infantile convulsions, "even in this dreaded disorder the majority will recover, even if no interference be practiced;" but the mortuary reports of New York, show a frightful amount of mortality for this disease, such as might convince the most inveterate *expectantie*, who ever waited upon Nature to cure a fatal disease, that it is inexpedient to entrust any one case to its remedial agency. Certainly, many of the cases which I have cured with chloroform in hypnotic doses, must have proved fatal without it; having resisted all the usual remedies, and in some instances been abandoned as hopeless.

The following is a brief description of these much dreaded cases of infantile disease: The child is seized, often quite unexpectedly, with all the symptom of chill, as it occurs, in the first stage of a febrile paroxysm, but in many instances the chilly sensation is not great or much complained of. In very young children it comes on unnoticed. It does not continue long—sometimes not more than fifteen minutes—before convulsive movements are observed about the mouth and face, extending quickly to the eyes and limbs, until the whole muscular system appears to be involved. The eyelids are stretched wide open, the eye-balls are blood-shot, and twitch with continual spasms, the pupils are dilated, the fingers and toes are drawn in and convulsed, and a quick succession of general convulsions, from which the arteries do not appear to be exempt, continue for one, two, or three hours, during which the pulse becomes enfeebled, the vital powers exhausted, the throat and bronchial tubes filled with mucus, and the spasms cease only to be followed by speedy dissolution.

In spite of the remedial powers of nature so strong in the young subject, and in spite of all the artificial remedies heretofore in use, this is the course and the issue of a majority of the cases of infantile convulsions proceeding from the effects of congestive chill; but my experiments with chloroform prove beyond all question that a hypnotic dose of this remedy given in any part of the course

of this alarming and dangerous disease, is certain to afford prompt and permanent relief. The quantity required, depends, as in other diseases and remedies, upon the age and constitution of the patient, and the intensity and duration of the disease; but to obtain its full curative effects, it is always necessary to administer such doses as will produce sleep. This alone is evidence of its constitutional influence, and the rule holds good with new-born infants, and with older children alike.

The remedy is equally efficacious, also, in chills and congestions in the adult subject, in concussion, sunstroke, hemorrhage, cholera morbus, pneumonia, delirium tremens, and in all other diseases dependent upon, or accompanied by severe congestion, as a prominent pathological condition. Indeed, it has in no case failed, in my hands, to relieve congestion, whether proceeding from the febrile cause, local irritation, or concussion. After having observed its wonderful power in cases of infantile convulsions, I have, from analogy alone, been led to use chloroform internally, in a variety of kindred affections, and with uniform success. From the same analogy I infer its efficacy in Asiatic cholera, in the treatment of which, it has, so far as I am informed, not yet been tried in hypnotic doses. In various parts of Europe chloroform has been used in cholera, both by inhalation and in small doses by the stomach, as it has been, in some parts of this country, in congestive chill; but I have not been able to ascertain that in any case reliance has been placed upon its full physiological effects, as evidenced by sleep, which alone insures its curative power. It is not enough that anæsthesia is produced by inhalation, or that partial influences over the nervous system in congestive chill, convulsions and cholera are to be overcome, it is only by placing the patient under the full physiological influence of chloroform, through the medium of the stomach and bowels, as evidenced, not by anæsthesia, but by sound and healthful sleep.

The largest quantity of chloroform I have given, was in a case of pulmonary hemorrhage, in which, under urgent circumstances, half a fluid ounce was swallowed in the course of half an hour, with prompt relief to the patient, and without disagreeable or untoward effects. In some cases of infantile convulsion, relieved by full doses of chloroform, the sleep produced, although calm and healthful, was followed by temporary nervous restlessness which subsided without remedies. In pneumonia and delirium tremens, I have given chloroform for several successive days in doses of a fluid drachm and upward, with the invariable effect of producing sleep, and sometimes when large doses of opium had failed, always affording relief to the irritations and congestions of the lungs and

brain. In these and other cases, the wakefulness produced by opium has always been relieved by chloroform, and I have sometimes suspected that there was a happy concurrence in the action of the two remedies. In no case have I observed injurious effects upon the mucus tissues, whether the chloroform was administered unmixed or in combination with mucilage or syrup; and my own firm conviction is that we have no other remedy which is powerful for good, that is less objectionable on account of evil results. I do not hesitate to recommend its use in the treatment of cholera, both by the stomach and by enema, depending, as I have done in other cases, upon the force of analogy; but I have little confidence in certain relief, unless the remedy be used in such quantity as may be required in each individual case to produce sleep, or, in other words, its full physiological effects.—*Richmond Medical Journal*.

[With the internal use of chloroform, in the treatment of puerperal convulsions and delirium tremens, we have succeeded when other means failed to give any relief.—Eds.]

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### *Dr. Salisbury's Discovery of the Cause of Intermittent Fever.*

It has come to be almost a matter of course in medical science that any one claiming to have made an important discovery is met at once by a counter-claim, by somebody who has anticipated him in every particular. There is either nothing in it, or it was known before. We ought not to be surprised, therefore, to find that the remarkable announcement of Dr. J. H. Salisbury, which we noticed some weeks since, that he had discovered the hitherto unknown cause of intermittent fever, has called forth a counter-claim. It is from the other side of the ocean, from France, that this claim comes. It is a discovery, it seems, announced so long since as August, 1864, and yet the medical world has been in profound ignorance of the fact until now! A few weeks since our editorial was made the subject of an article in the *Union Medicale*, and the discovery was laid before the readers of that journal as one of remarkable importance, and sure, if confirmed, to confer great distinction on the discoverer. The article has

called out a communication from M. Lemaire, which the Union for March 27th publishes as follows :

"It is with no less satisfaction that we enter a claim of priority concerning Professor Salisbury's discovery of the causative agent of intermittent fever, published in the last number but one. It ought never to be an ungrateful task to avow one's ignorance, to repair an error or omission ; it is much more pardonable than bad faith or partiality. We make the *amende* here all the more cheerfully that it has for its object the investigations of a laborious and distinguished confrere, Dr. Lemaire, the author of the Treatise on Phenic Acid, to whom we give place to clear up the history of this question.

"In 1861, I demonstrated at the Museum of Paris to Professor Gratiolet, Doctors Senechal and Desmarests, assistants, that the gases which are disengaged from matters in an advanced stage of putrefaction always contain, in the vapor accompanying them, either spores or other germinal bodies of microphytes or microzoa. It is sufficient to condense this vapor by cold and to examine it under the microscope to demonstrate this.

"I published the result of my first researches in the *Moniteur Scientifique* of Dr. Queasneville in 1862, in the number for the 15th of October. I made use of this discovery, at the time, in that journal, to maintain that the miasms which give origin to marsh fevers, etc., are living organisms. This paper was republished in the first edition of my book on Phenic Acid.

"In 1864, leaving my laboratory, I went to Sologne with my friend Professor Gratiolet, to repeat my experiments on the miasms which are disengaged from the numerous swamps of that region. We chose those which were reputed the most unhealthy by the inhabitants.

"We condensed, by means of cold, at the height of a metre [about 39½ inches] above the level of the marshes, the vapor which was given off ; we examined it by our unassisted senses, by reagents and by the microscope. We observed that at the moment of condensation this liquid contained spherical, ovoid and fusiform spores, as well as a great number of pale cells of different dimensions. We found a considerable quantity of very small, semi-transparent bodies, of which I described the forms.

"You will find the *resume* of these researches, with others not less interesting on the same subject, in the *Comptes rendus* of the Academy of Sciences (sessions of 17th and 29th of August, 1864). I have published an extract from them in the second edition of my book on Phenic Acid, p. 188 and the following pages, and on page 355.

"I have much to say with regard to the work which you have noticed, but I reserve my remarks for a full memoir on microphytes and microzoa, for which I have been collecting abundant materials for many years.

"I have only wished to demonstrate to you that the honor of this discovery does not belong to Professor Salisbury. I hope that the information which I have given you is sufficient to clear up your mind on this point.

"The experiments of Dr. Salisbury offer nothing new except the discovery of the microphytes in the expectoration of the sick. It remains now to be seen if other experiments confirm this assertion of the learned professor.

I am, &c.,

J. LEMAIRE.

"The priority of the discovery is thus incontestable. To France returns all the honor of it, for the vegetable origin of these febrigenous spores is but negatively settled. May their pathogenic interpretation be confirmed, and our learned compatriot thus acquire a new claim to the acknowledgments of all the friends of science."

So much for the claim of priority by Dr. Lemaire. In brief it may be stated to be, that in 1861 he demonstrated the presence of spores and other microscopic bodies in the emanations from putrescent matter; that in 1862 he suggested that fever-causing malaria is due to living organisms; that in 1864 he found microscopic forms of various kinds in the condensed vapor given off from an unhealthy marsh.

These observations are certainly extremely interesting and very important; so far as they go, they confirm Dr. Salisbury's observations most fully and satisfactorily. But we contend that they do not transfer the honor of the discovery of the cause of intermittent fever from America to France, inasmuch as they stop short of demonstration. What Dr. Lemaire calls the only novelty in Dr. Salisbury's observations, contains, in our opinion the great point of the discovery. Dr. Lemaire discovers certain bodies in gaseous emanations, and suggests that malarious diseases are caused by living organisms. Dr. Salisbury has done much more than this. He finds the bodies, eliminates certain distinct species, which he finds in different localities, examines the secretions of intermittent fever patients, detects the same bodies there, experiments with the poisonous algoid in a locality far removed from any spot where the disease had ever been known to exist, and actually creates in this way the disease in a number of persons. Perfecting his observations, he is able to make out a number of species of these cryptogamous plants, and to discriminate those which

give origin to remittent fever from those which produce intermittent. Surely he is entitled to some credit for all this. We would not deny to Dr. Lemaire any honor which his observations deserve. It is very plain that they had not produced much impression in Europe—if for no other reason, that a journalist in the same city announces Dr. Salisbury's discovery as a novelty of unusual importance, being at the time in complete ignorance of his compatriot's labors. At the same time we would remark that it is no novelty for the intermittent fever to be *theoretically* attributed to an organic cause; but so far as we are at present informed, to Dr. Salisbury belongs the honor (if his observations are confirmed by others) of having *demonstrated*, and so made of practical importance, this wonderful discovery.

We would remark, in closing, that the original article in the Union was evidently based upon our editorial on the subject, although no reference to this Journal appears. If the author had read the paper in full in the American Journal of Medical Sciences we are persuaded he would have seen very much more in it to admire and honor than it was possible for us to introduce into our pages.—*Boston Medical and Surgical Journal*.

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*New and Ready Mode of Producing Anæsthesia.*—Dr. W. B. Richardson has been for some years engaged in researches for the production of local anæsthesia. Snow maintained that all narcotics produced anæsthesia by the process of arresting oxidation. Dr. R. has come to the conclusion that arrest of oxidation means arrest of motion, and that anæsthesia in truth means the temporary death of a part, *i. e.* inertia in the molecules of the part. This led him to the conclusion that Dr. Arnott's plan of using extreme cold was the first true step in the progress of discovery, and that if it could be made easier of application and at the same time could be combined with the use of a narcotic fluid, an important advance in therapeutics would necessarily follow. Dr. R. has been for four years engaged in experimenting with a view to demonstrate this. Finally he has devised an apparatus consisting "simply of a graduated bottle for boiling ether; through a perforated cork a double tube is inserted, one extremity of the inner part of which goes to the bottom of the bottle. Above the cork

a little tube, connected with a hand bellows, pierces the outer part of the double tube, and communicates by means of the outer part, by a small aperture, with the interior of the bottle. The inner tube for delivering the ether runs upwards nearly to the extremity of the outer tube. Now, when the bellows are worked, a double current of air is produced, one current descending and pressing upon the ether, forcing it along the inner tube, and the other ascending through the outer tube and playing upon the column of ether as it escapes through the fine jet. By having a series of jets to fit on the lower part of the inner tube, the volume of ether can be moderated at pleasure; and by having a double tube for the admission of air, and two pairs of hand bellows, the volume of ether and of air can be equally increased at pleasure, and with the production of a degree of cold six below zero.

"By this simple apparatus, at any temperature of the day and at any season, the surgeon has thus in his hands a means for producing cold even six degrees below zero; and by directing the spray upon a half-inch test-tube containing water he can produce a column of ice in two minutes at most. Further, by this modification of Siegle's apparatus he can distribute fluids in the form of spray into any cavities of the body—into the bladder, for instance, by means of a spray catheter, or into the uterus by an uterine spray catheter.

"When the other spray thus produced is directed upon the outer skin, the skin is rendered insensible within a minute; but the effects do not end here. So soon as the skin is divided the ether begins to exert on the nervous filaments the double action of cold and etherization; so that the narcotism can be extended deeply to any desired extent. Pure rectified ether used in this manner is entirely negative; it causes no irritation, and may be applied to a deep wound, as I shall show, without any danger. I have applied it direct to the mucous membrane of my own eye, after first chilling the ball with the lid closed.

"I have now employed this mode of producing local anæsthesia in four cases on the human subject. The first case was the extraction of a tooth from a lady, the operation being performed by my friend and neighbor Dr. Sedgwick, on January 24th of this year. On the 29th of the same month I used it again on the same lady for the extraction of three very difficult teeth, Dr. Sedgwick again operating. The result was as satisfactory as in the previous case, where the ice and salt ether apparatus was used.

"I have used the apparatus also in connection with my friend Mr. Adams, who had a case at the Great Northern Hospital of deep dissecting abscess in the thigh of a young woman. In the

abscess there was a small opening, which just admitted the director. I first narcotized around this opening, and the director being introduced, Mr. Adams carried his bistoury nearly an inch deep and one inch in the line of the director. I then narcotized the deep-seated parts, and enabled him to cut for another inch and a half in the same direction. The director was then placed in the upper line of the abscess, the process was repeated, and the incision was carried two and a half inches in that direction. The patient was entirely unconscious of pain, and after narcotizing the whole of the deep surface, Mr. Adams inserted his fingers and cleared out the wound without creating the slightest evidence of pain.

"Afterwards, in the case of a lacerated wound, six inches long, in the arm of a boy, who had been injured with machinery, I narcotized while six sutures were introduced by Mr. Adams. The first needle was carried through without the anæsthetic, and caused expression of acute pain; the remaining eleven needles, after a few seconds' administration of the ether spray, were passed through painlessly. The twisting of the wire sutures gave no pain.

"These results are so interesting that I make no apology for bringing them at once before my medical brethren. I wish it to be distinctly understood that at the present moment I only introduce the method here described for the production of superficial local anæsthesia. It is, I believe, applicable to a large number of minor operations, for which the more dangerous agent chloroform is now commonly employed—I mean such operations as tooth extraction, tying nævus, tying piles, incising carbuncles, opening abscesses, putting in sutures, removing small cancer of the lip, and other similar minor operations which I need not mention. The process may also be applied to reduce inflammation.

"In course of time, and guided by experience and the advancement of science, we may, however, expect more. If an anæsthetic fluid of negative qualities, as regards irritation of nerve, and which has a boiling point of  $75^{\circ}$  or  $80^{\circ}$  can be obtained from the hydrocarbon series, the deepest anæsthesia may be produced, and even a limb may be amputated by this method. It may also turn out that certain anæsthetics may be added to the ethereal solution with advantage, such as small quantities of chloroform, or some of the narcotic alkaloids, if they could be made soluble in ether. A solution of morphia and atropia combined, if they could be diffused through ether, which at present seems impossible, could thus be brought into action so as to cause deep insensibility. In operating on the extremities it would be good practice to stop the current of warm blood by making pressure above on the main artery.



"Reaction from the anæsthesia is in no degree painful, and hemorrhage is almost entirely controlled during the anæsthesia.

"One or two precautions are necessary. It is essential, in the first place, to use pure rectified ether; methylated ether causes irritation, and chloroform, unless largely diluted with ether—say one part in eight—does the same."—*Med. Times and Gaz.*, Feb. 3, 1866.

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*Domestic.—Lime Inhalations in Diphtheritic Affections.*—By A. GEIGER, M. D., Dayton, Ohio.

I am glad to meet with the *criticisms* of your correspondent, Dr. T. A. Reamy, upon my letter that appeared in the *Reporter* of March 10th, because that by discussion truth is oftentimes elicited, and important facts are thus brought to the notice of the profession, which, otherwise, might remain a long time in oblivion; and because it affords to me an opportunity of stating more specifically the nature of the lime treatment, my method of using it, and the reasons why I was led to adopt it. The letter referred to, was written in a hurried manner, and did not contain a full report of the case, and was not intended for publication, as I stated to you at the time, but simply as further confirmation of the lime treatment, as recommended in the communication that accompanied it, and which is published in the *Reporter* of March 24th. The correction of a small error made by the "compositor" will, I think, lead the doctor to agree with me that I was not mistaken in my diagnosis of the case.

I wrote—"the boy had been exposed on last *Thursday*, (that very cold day which will be remembered by us all,) and at night was taken with hoarse cough, and fever" etc. The compositor has it "last *Saturday*," which makes a difference of two days, and I know that the doctor is not prepared to assume that "spasmodic croup," which he seems to be very sure the case was, would last, accompanied with fever and hoarse cough, and the patient confined to bed for three days, which was really the length of time my patient was sick, before I visited him.

And the doctor will certainly not charge me with recommending the lime inhalation, as a *specific* in diphtheria and membranous

croup, when he mentions in the same connection the fact, that I used "hive syrup, calomel, rhubarb," etc. I was aware of the objection, that a comparatively new treatment in a disease so formidable as the one under consideration, would meet in the minds of physicians. And in the same letter stated in language similar to that used by your correspondent: "That I had frequently employed new remedies in the treatment of diseases which had been recommended by others with great confidence, but that in my hands I had often been disappointed in obtaining like favorable results," and that, I feared that others would regard my recommendations with like distrust, and hesitate before adopting the treatment, which was more particularly given in the communication that accompanied my letter. And it was only after having given the treatment what I regarded "a fair trial," that I felt warranted in presenting the matter through your columns to the consideration of the profession at large.

Although I have read the article which appeared in the *Reporter* of Sept. 9th, taken from the *Brit. and For. Med. Chir. Review*, in which favorable report was made of several cases successfully treated by lime inhalations; yet the mode of applying the treatment was so vague, that I could not see in what way the lime was brought in contact with the membrane of the air passages to dissolve it, and did not attempt to use it, although at the time an epidemic of diphtheria was prevailing in this city.

In Wood's *Practice of Medicine* we find it also stated, in speaking of the nature of the false membrane in pseudo membranous croup, that it is dissolved by alkaline solutions, and strong acetic acid, and in the treatment, that alkalies have been administered and were strongly recommended by some writers, supposing that they would have the power to dissolve the secreted membrane, as they are known to do out of the body. That at one time they had obtained quite a reputation, but have since fallen into neglect.

After having obtained the false membrane expectorated by the boy, John Willis, I placed a portion of it in lime water, and found that it dissolved very readily, and then felt satisfied that if some method could be devised to bring the lime in contact with the membrane in the wind-pipe that it would dissolve it there; my ingenuity was put to the task to discover some means by which this desired object would be accomplished.

I obtained some unslacked lime, and placed it in a vessel, and poured upon it first cold water, and upon inhaling it could discover no effects.

I then poured over another portion *hot* water, and inhaled the steam arising from it. After inhaling it a few moments, I could

distinctly feel in the air passages, the smarting action of the lime, and determined to try the effects of the lime inhaled in this way in the next case of diphtheria, or pseudo membranous croup, occurring in my practice.

*In this process, the steam arising from the lime in slacking, contains in it particles of lime which are thus by inhalation brought in contact with the membrane in the windpipe.*

I have used it in this way, and so have others with the results already reported to you, and also at the same time have administered lime water internally; I must confess, rather more *empirical*, than *rational*, but with the hope that it would have some influence in preventing or arresting the formation of the membrane.

Dr. A. Shuleok, of this city, and one of your subscribers, reports to me this morning two cases of pseudo membranous croup successfully treated by the lime inhalations, and it is to be hoped that in its further trial by the profession, it will prove to be a valuable remedy, but it is not claimed as a *specific* in the treatment of this heretofore unmanageable disease.—*Phil. Med. and Surg. Reporter.*

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*Trichina.*—The aversion to pork, produced by the agitation of the subject of trichiniasis, has induced the Chicago Academy of Sciences to appoint a committee to investigate the subject, with a view to ascertain the exact state of facts, in order that the public may know whether the trichina exists in this region or not, and if it does, whether the consumers of pork can, in any way, be assured of safety in the use of this important staple. The present state of uncertainty in the public mind is injurious to various interests.

The committee commenced by obtaining specimens of muscle from about 1300 different hogs, from all parts of the West, fed in various ways, and raised in all sorts of circumstances. These specimens were distributed among eight of the best microscopists of this city, for examination. The result showed that trichina, beyond all doubt, exists here, and probably has existed through all time wherever hogs have lived. Among the 1300 animals, 28 were found to contain the parasite, which is rather more than 1 animal in 50, or 2 per cent. Of these, only 3 or 4 contained them

in dangerous quantities. The committee reports that the statement that trichinæ can endure a boiling heat without death, is false and absurd. By actual experiment, they are found to be always killed by a temperature of 150° Fah. It is proved, also, that salting and smoking for 10 days is fatal to them. A case of trichiniasis is reported at Detroit, Mich., in the *Medical Review*, in which a woman, lately arrived from Germany, died, having eaten the parasites before her arrival here. Two cases were also reported in the *Buffalo Medical Journal*, two or three years since, but with the exception of these three, the committee cannot learn of any deaths clearly traceable to trichiniasis in this country. In Germany, where so many deaths have occurred, the poor people have a habit of eating a large amount of raw pork, in which state the parasite is taken alive into the stomach of the patient; but in this country, pork is universally well cooked, even by the most indigent. This accounts for the fact, that though trichinæ are doubtless as ancient and universally distributed as the hogs themselves, and Americans have always made pork a very prominent article of diet, yet the disease is almost unknown this side of the water.

The conclusion is, that pork in a raw state, or not thoroughly cooked, is a dangerous food; but, when well cooked to the centre, is as absolutely safe as any other article of diet. It is proper to add, that trichinæ are found in a variety of animals besides swine, and that the same rule, as to thorough cooking, ought to be applied to all, whether fish, flesh, or fowl. Not only is trichina found widely distributed, but also the germ of the tapeworm may be found in a variety of animals used for food. Beef and mutton are, probably, more free from parasitic dangers than any of the meats in common use.—*Chicago Medical Journal*.

## EDITORIAL AND MISCELLANEOUS.

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*To the Officers and Members of the Medical Association of Ga.:*

At the last annual meeting of our Association, held in Atlanta, in 1861, I had the honor of being chosen your presiding officer. It is needless to mention the causes which have prevented any meeting since that time; they no longer exist, but the laudable purposes which first led to the organization, and which annually collected together at the appointed times and places, so many devotees to medical science, again claim our attention with increased interest.

The ability of our profession to protect itself in its purity, advance its interest and extend the domain of its usefulness, must, in a great measure, depend upon our united action. Under this impression the Association was organized. It affords the only opportunity to enlist and combine in united methodical labor, the professional talent of our State.

It is the *expressed wish* of many of our members that the Association be called together, so that its members may, again united, labor in the fields of science. From these considerations I hereby appoint a meeting of the Medical Association of Georgia, to be held in Atlanta, on the 21st of June, 1866.

In selecting the location I have been directed entirely by the wishes of members, as made known to me; Atlanta being the only place in which members of the profession have expressed a willingness to make preparations for the meeting.

The Atlanta Medical and Surgical Journal has kindly promised to publish so much as is necessary, of the proceedings of our last meeting, to which members are respectfully referred, with the hope that such special duties as were imposed on individuals and committees, then for 1862, may be discharged with reference to the appointed meeting.

As the good results flowing from our annual meetings are in proportion to the number in attendance, it is our sincere desire that every member will sacrifice upon the altar of our profession such individual interests as would otherwise prevent their attendance; and all other members of the profession, *in good standing*, are respectfully invited to attend.

The committee of arrangements will no doubt secure, as usual, transportation for the return of members over the various railroads.

J. T. BANKS,  
*Pres. Med. Asso. of Ga.*

Griffin, Ga., May 15, 1866.

*Medical Association of Georgia.*—From the foregoing call of the President, it will be seen that the next meeting of the Association is appointed to be held in Atlanta, on the 21st June, prox. It seems, from Dr. Banks' reason for calling the meeting in Atlanta, that no other place sought it, and that in the position of things, after four years suspension of its functions, the resuscitation is sought, and properly, too, we think, at any point where, from the expression of even a few members, they desire to make preparations for the deliberations of the Association.

We have before alluded to the importance we attach to the transactions of this body. As a means of stimulating members of the profession to investigation on scientific questions, and of promoting the advancement of the medical profession, we think the annual meetings of this body are highly important. While we have no selfish preference for any particular place of meeting, we are pleased in being able to publish the call, and would have been equally so, had it been at any other point. We feel warranted in assuring our professional brethren of the State, that Physicians here, feel a lively interest in the Association, and look to its meetings as a source of advancement in medical science, and a blessing to the objects of medical skill.

The new feature in the programme, adopted at last meeting—that of calling for prize essays—we think is a good one. We have no intimation of any intending to produce an essay for this purpose, but as it is understood that the prizes will be ready for the successful competitors, we suppose essays for this purpose will be presented.

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*Extracts from the Proceedings of the Medical Association of Georgia, for 1861.*

The President having ordered a ballot for officers for the ensuing year, a ballot was taken, which resulted in the election of

Dr. J. T. BANKS, of Griffin, President.

Dr. J. F. ALEXANDER, of Atlanta, 1st Vice-President.

Dr. V. H. TALIAFERRO, of Columbus, 2d Vice-President.

Dr. A. G. THOMAS, of Atlanta, Secretary.

## AFTERNOON SESSION, 3 o'clock, P. M.

Minutes of forenoon read.

Reports from auxiliary societies being called for, Dr. B. B. Brown reported the formation of a society of physicians residing in the counties of Catoosa, Whitfield and Murray, called the State Line Medical Association, composed of fifteen members, holds monthly meetings, has adopted the Constitution and Code of Ethics of the Medical Association of Georgia, and desired to be admitted as an auxiliary to that body.

On motion of Dr. Coe, the Society was admitted as auxiliary.

Dr. J. G. Westmoreland, from committee appointed at last meeting to memorialize legislature, made a report, which, on motion of Dr. Coe, was received, and committee continued till next meeting.

Dr. Logan moved to defer action on the resolution with regard to permanent location of this Association till next meeting. After some discussion was carried.

On motion of Dr. Alexander, committee on revision of Constitution and By-Laws was continued, to report at next meeting.

On motion, committee on Medical Literature was discharged.

On motion of Dr. Simmons, committee on Finance was continued till next meeting.

Dr. O'Keefe moved that a committee of three be appointed to raise \$100, to be distributed as prizes for the three best Essays presented to next meeting—\$50 for the first, \$30 for the second, and \$20 for the third. Carried. Committee, Drs. O'Keefe, Taliaferro and Boyd.

On motion, the President appointed, as the committee to examine Prize Essays, Drs. H. Coe, A. Means, J. F. Alexander, H. W. Brown and T. C. H. Wilson.

On motion of Dr. Coe, a committee of three was appointed to take convenient time and procure the services of Orator and alternate for next meeting. Committee, Drs. Coe, Dannelly and Brown.

Dr. O'Keefe offered the following, which, on motion of Dr. Logan, was adopted:

*Resolved*, That the committee on Prize Essays be instructed, in awarding prizes, to give preference to subjects of practical interest to the profession, and to award the prizes publicly, during the session of the Association, in cash or its equivalent, at the discretion of the committee.

On motion, the President was required to appoint at his convenience a committee of arrangements.

*Atlanta Medical College—Clinical Instruction.*—The system of Practical Medicine instituted for the present course in the College promises, thus far, eminent success. One hour every day in the week is devoted exclusively to prescriptions and operations, exclusive of two hours on Wednesdays and Saturdays devoted to lectures and surgical operations on special and interesting cases. A Dispensary is established by the institution in which, after examinations and prescriptions have been made in presence of the class, medicines are furnished the poor of the city, who require treatment. In this way great advantages are afforded the student, and a blessing bestowed on the indigent sick, who daily flock to the dispensary. The hour thus occupied is that which immediately precedes the opening of regular lectures for the day. The systematic course pursued not only affords the class practical lessons in diagnosis, etc., but an opportunity of witnessing the daily progress of each case and the effects of the remedies prescribed. Members of the class are selected to record the cases presented, to write the prescriptions, and to combine the preparations prescribed. The learner is thereby given the opportunity not only to see these practical demonstrations, but to assist, himself, in that with which it is so important to become familiar.

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We are in receipt of the "Descriptive Catalogue of Fluid and Solid Extracts in vacuo; also Concentrations and Official Pills." By Henry Thayer & Co., Cambridgeport, Mass.

This is a handsomely gotten up volume of 218 pages, giving, in addition to the formulas for their preparations kept for sale, numerous receipts and formulas, for the benefit of those who like such things.

The Medical Sciences are progressive, and none have made more rapid strides towards perfection than that of Pharmacy. Within the limit of our recollection, Peruvian bark was administered in substance, in the form of extemporaneous mixture of the



pulverized bark with water. Not in the form of infusion, but in substance. Now, not only are the active principles separated from the useless and nauseous mass with which they are combined, but enveloped in sugar, so that not the slightest taste is perceived, but of the most pleasant character. Concentrations and Extracts enable the physician to obtain from quantities wonderfully small in bulk, the full effects of remedies once required to be given in large quantities and of such offensive preparations that nothing short of the determined will and vigorous stomach of the patient could accomplish the task. The presence of medicinal agents in the stomach is tolerated, and their effects more certainly secured now than formerly, to say nothing of the unpleasantness to the patient and trouble to the physician.

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*Treatment of Scabies.*—Under this caption, on page 47 of the March number, is an extract from Dr. Nicholls, describing the plan of treatment introduced some ten or more years ago, by Dr. Bourguignose, of Belgium. Dr. B. claims that it will cure itch in *half an hour*, which is doubtless true of many cases. The application of the fluid should be preceded by soap and warm water bath, with constant careful friction of the entire skin for half an hour or more. Then the preparation should be rubbed into the skin for half an hour. As it evaporates, the skin is left coated with sulphur, the episoa are killed, and the patient is cured.

I have sometimes prescribed this treatment, but oftener another similar to that of Dr. Hebra, of Vienna; both with very satisfactory results. I have, however, used most frequently the method of Helmerich, as improved by M. Hardy, effecting a radical cure of the worst cases in *two hours*. It is as follows: Rub with soft soap for half an hour the entire surface; follow with a warm bath for an hour, rubbing well all the while to break up the burrows; then rub in the ointment for half an hour, and the treatment is completed. The ointment is made by mixing together two parts of sulphur, one part of carbonate of potash and eight parts of

lard. I have sometimes used the bicarbonate of potash instead of the carbonate with the same result.

D. L. PHARES, M. D.

Newtonia, Miss., May 1, 1866.

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Contestants for premiums on Essays to be presented to the approaching meeting of the Medical Association of Georgia, are requested to hand in, or forward by mail, their manuscripts to the undersigned, in Atlanta, on or before the 18th of June. Each Essay should be accompanied by a motto, and a separate sealed envelop should inclose the same motto and the name of the writer.

Address

A. MEANS, M. D.,  
Ch'n Examining Com., Atlanta, Ga.

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*New Medical Journals.*—The first number of the "Southern Journal of Medical Sciences," of New Orleans, is on our table, and is entered with great pleasure on our list of exchanges. We had the pleasure of its perusal, however, saddened by the astounding news of the death of its leading editor, Dr. E. D. FENNER. We wish the Journal all the success marked out for it by its lamented senior editor.

The third series of the "Southern Medical and Surgical Journal," at Augusta, Ga., will be commenced the first of July next, edited by JOSEPH JONES, M. D., Professor of Chemistry in the Medical College of Georgia. It will be issued bi-monthly, and contain one hundred and seventy-six pages. Terms \$5.00 per annum.

New series of the "Nashville Journal of Medicine and Surgery," a monthly of eighty pages, will be issued the first of July. Edited by W. K. BOWLING, M. D., Professor of Practice, assisted by P. F. EVB, M. D., Professor of Surgery, University of Nashville. Subscription price \$5.00.

The announcement of the fifty-ninth session of the School of Medicine, at the University of Maryland, commencing 15th October, 1866, is received. In addition to the full corps of eight regular Professors, five adjunct Professors to the chairs of Surgery, Obstetrics, Practice, Materia Medica and Chemistry are announced. The course will end on the first of March, 1867, four months and a half being occupied, instead of four, as heretofore.

Address

GEO. W. MILTENBERGER, M. D.,

Dean of Faculty.

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The catalogue and circular of Albany Medical College is before us. In it we find the names of forty-one graduates for 1865, and a catalogue of all the graduates of the Institution. The next term commences on the first Tuesday in September next; it continues sixteen weeks.

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*American Medical Association.*—The following officers were reported at the recent meeting of this body held in Baltimore: President, H. F. Asken, of Delaware; Vice-Presidents, W. K. Bowling, of Tennessee; J. C. Hughes, of Iowa; H. J. Bowdich, of Massachusetts; Thos. C. Brinsmore, of New York; Permanent Secretary, Wm. B. Atkinson, of Pennsylvania; Assistant Secretary, W. W. Dawson, of Cincinnati; Treasurer, Casper Wistar, of Pennsylvania. Cincinnati is the place for next annual meeting.

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*Obituary.*—The Memphis "Medical and Surgical Monthly" brings us the sad intelligence of the death of Dr. E. D. FENNER, of New Orleans. His loss to society and the medical profession we deplore. He was known to us as an able and useful medical writer, and honorable gentleman. As a teacher he won the confidence and respect of those who knew him in connection with the new "School of Medicine" in New Orleans.

ATLANTA  
**Medical and Surgical Journal.**

NEW SERIES.

VOL. VII.

JULY, 1866.

No. 5.

ORIGINAL COMMUNICATIONS.

ARTICLE I

*Phytolacca Decandra, Modus Operandi and Therapeutic Value of; with a Case of Poisoning by the Tincture of the Root.* By  
A. W. GRIGGS, M. D., West Point, Georgia.

The use of the root and berries of the *phytolacca decandra*, as a domestic remedy, and reputed therapeutic value of the same, vouched for by many medical gentlemen of standing in the profession, (and also by those not altogether orthodox,) induce me to resume the pen, and venture once more before your readers. You will find in perusing the following report, that a certain train of symptoms was observed, more like those produced by *nux vomica* and its preparations than any that have yet been described, as resulting from the use of the poke. This will of course be a point of interest to the therapist.

Without further preliminaries, allow me to state, that on the morning of the nineteenth of February last, at eight o'clock, I visited the family of Mr. Wilson, nearly a mile distant, and was invited to examine and prescribe for his child—a male mute of six years old. Was informed that an hour or so previously he had

swallowed a small quantity (fluid drachms two or three,) of the tincture of the root of the common poke. His extremities were stiff; hands firmly shut; feet extended and toes flexed; eyes bleared and dancing, pupils contracted, inferior lids drawn down; teeth clenched; lips everted and firm: muscular rigidity was general, and episthotonos established. The circulation numbered eighty-five beats per minute; pulse soft and unresisting; temperature nearly natural; the respiration difficult and oppressed; mucus rale distinctly audible anywhere in the room. The contraction of the *masseters* precluded the idea of addressing remedies per os, and the amount of mucus in the bronchiæ that of administering anæsthetics. A boy was dispatched to the office for cupping case and mustard; returned at nine o'clock. During the hour I had noticed increased muscular rigidity generally, with convulsive action of the muscles of the face and neck, (the chin drawn closely down to the sternum); which condition would last five or ten minutes, to be succeeded by partial relaxation, and return in twenty minutes more, with the same violence. Cold had been applied to the scalp, and I now proceeded to cup him freely over the temples, the cervical and dorsal spine, and subsequently applied a sinapism from atlas to sacrum. A stream of cold water was now gently poured upon the head, almost constantly for an hour; when the symptoms began to abate, the muscles gradually losing the *tetanic* spasm, and complaint was made of the mustard. At noon he was able to drink a cup of sweet milk which was given. He then slept twenty or twenty-five minutes, (which he had not done before,) and was awakened by slight jerking and twitching of the muscles, especially those of the inferior extremities. He also made signs indicating pain in the back of the head and in the stomach. The water was re-applied, and another cup of milk given. The head was then enveloped by wet towels, which were frequently changed, and the milk allowed ad libitum. At four o'clock he again fell asleep, and rested quietly for an hour and a half. The distressing symptoms had now almost entirely disappeared, and I left the patient, having first ordered a dose of castor oil to be given at bedtime. On the following day the little boy was up and frolicsome, although sore and somewhat stiffened. Nothing more was

prescribed, and he recovered without a return of any of the previously mentioned symptoms, and there was no sequela. In conclusion, I think it proper to state that there was retention of urine for ten hours, and that neither emesis nor catharsis took place in this case until the latter was prompted by the use of castor oil; further, the slightest nausea was not at any time observable.

Having positive proof that the patient had taken the drug, and nothing else—not even breakfast—I was at first perplexed knowing that such symptoms in general had not been, before, ascribed to the use of the phytolacca. [See U. S. Dispensatory.] Now was this an idiosyncratic case? Ground is here left for experiment and speculation. From the views which I have long entertained as to the pathology of rheumatism, and the known efficacy of the phytolacca in controlling it, after the acute stage has passed, I am greatly inclined to believe that the symptoms referred to in the case described were such as might have reasonably been expected to have occurred. I am free to admit that we have for some time been at sea respecting the nature of rheumatism; and I cannot, in this article, do more than allude to the fact that, agreeably to my experience, that plan of treatment is most successful which is based upon the idea or belief that the *medulla spinalis* is at fault. Therapeutics often dissipates the darkness of pathology, although the latter, when understood, invariably should direct the former. Thus you may understand, that if the case here reported might be taken for a criterion so far as the specific action of phytolacca is concerned, the pathology of certain forms of rheumatism would be clear. I am apprised that caution should mark every step in science—that we should not build on an insecure foundation—and as before mentioned, that there is here room for experiment and speculation; but, impressed by the action of phytolacca in this case, and knowing its value in treating rheumatism, and believing rheumatism for the most part due to disorder of the cerebro spinal system, I cannot refrain from looking further on, to inquire whether the tincture of the root of phytolacca decandra may not some day be to strychnia what the tincture of veratrum viride is now to tartarized antimony.

## ARTICLE II.

*An Address, introductory to the Eighth Regular Summer Course of Lectures in the Atlanta Medical College.* By S. H. STOUT, M. D., Professor of Surgical and Pathological Anatomy.

## CORRESPONDENCE.

ATLANTA, May 18th, 1886.

PROF. S. H. STOUT:

*Dear Sir:*—The members of the present class of the Atlanta Medical College, having been much pleased with the able Introductory Address delivered by you, and believing that a review of it would be both interesting and beneficial, have appointed the undersigned a committee to request of you a copy for publication.

Hoping you will comply with our request, and assuring you of the high esteem with which you are regarded by the class, we remain,

With much respect, yours.

ROBT. S. CAMERON, of Ga.,

F. D. NABERS, of Ala.,

C. O. O. ROBERTS, of Fla.,

M. D. STERRETT, of Texas,

A. E. FANT, of S. C.,

R. P. SPENCER, of Va.,

G. W. ANDERSON, of Miss.,

Committee.

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ATLANTA, GA., May 21st, 1886.

GENTLEMEN:

I cannot refuse to comply with your request contained in yours of the 18th inst., and herewith hand you a copy of the address alluded to.

Grateful for the expression of the kind regard of the class whom you represent,

I am respectfully your ob't sv't,

S. H. STOUT.

To Messrs. Cameron, Nabers, Roberts, Sterrett, Fant, Spencer, Anderson, Committee.

A D D R E S S .

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*Gentlemen of the Medical Class :*

Pledging their unremitting attention to their duties as your teachers and friendly advisers, in the name of the Faculty of the Atlanta Medical College, I bid you *welcome*.

For and on behalf of the good citizens of Atlanta, I assure you of their sympathies and kind wishes for your success in the pursuit of the object of your sojourning among them.

The many landmarks and associations suggestive of the past, which here attract the attention, are combined with many incidents and facts which forcibly remind us of present duties, and indicate that our future is not altogether hopeless of a return to happiness and prosperity.

That pile of ruins, those blackened walls, that line of rifle-pits, those redoubts, those fields, beneath which lie the Federal and Confederate dead, every living man and woman, and almost every child you see, have a tale to tell of devastation and desolation, of marches and countermarches, of battles fought, of victory and defeat, of exile, of hopes disappointed, of sorrow, of terror and despair.

But the busy, active throng of merchants, traders, manufacturers, mechanics and laborers—the whistle of the locomotive, the hum of machinery, the sound of axe and hammer, and the moving mass of merchandise and building material—give earnest that the recuperative energies of the people of the subjugated South are not totally destroyed; that there is “life in the old land yet;” that we can adapt ourselves to our changed circumstances, and from the *debris* of our fortunes and of society, revive our material interests; rebuild, with some additions and changes of plan, our social structure; re-open our institutions of learning; restore order and embark in enterprises promising honorable remuneration for labor and toil.

“History is philosophy teaching by example.” And such a history as has been ours during the last five years, cannot fail to



exercise an influence for good upon the temper and future conduct of our people.

The very disasters they have met with, the losses they have experienced, the earnestness of their resistance, and the realization of their worst fears, impress them that there are yet duties to be performed—new and weighty responsibilities to meet.

Never, in the history of any people, has society experienced such convulsions. Never was there a greater necessity for wisdom in council, integrity of purpose and honor in the performance of every duty. The history of the Southern people gives assurance that they are frank and trustworthy. Their present conduct indicates their claim to this high character.

How each and every one may meet the obligations of the hour, is exercising the thoughts of every conscientious and intelligent man and woman in the land.

To the politicians and statesmen the people have committed the business of untangling the complicated politics of the country, and these are now intensely occupied with their task. The merchant, mechanic, and agriculturist, having each in his sphere appropriate duties to perform and responsibilities to meet, are busily engaged in restoring trade, inaugurating new enterprises, developing new resources, enhancing the value of raw material by industry and skill, and persuading the soil to yield the products so necessary to our comfort and prosperity. Thus quietly, unobtrusively, this earnest people are struggling to arise self-supporting from the ashes of their ruined fortunes and institutions.

Never has there been exhibited such moral heroism; such quietude after a stupendous war—after such ruin and devastation. The epoch in which we live will, ages hence, be celebrated; and if we succeed in securing a return to prosperous peace, the wisdom of our policy will be as much admired as the exploits of our heroes.

Having lost our cause by the verdict of the tribunal of arms, to which we appealed, like a family bereft of its head, we have returned to our homes, after performing the funeral obsequies of the Confederate States Government, when the last gun was fired, and the last cannon roared.

We would be dishonest to profess that we regret not our loss.

We are honest in accepting the situation and in rejoicing that bloodshed has ceased, and that we are again permitted to cultivate the arts of peace.

Of the resurrection of the dead cause, men of common sense have no hope. For the age of miracles has passed, and the stern realities of the situation forbid the vain indulgence of the imagination.

We do truly mourn for our missing heroes dead. Though no proud monuments may mark the spots where rest the brave,

"By fairy hands their knell is rung,  
By forms unseen their dirge is sung;  
There honor comes, a pilgrim gray,  
To bless the turf that wraps their clay."

And while memory lasts or thought endures, the true people of the South—and these are they who will not violate their obligations—will ever love to dwell with pride upon their history and their exploits and with mournful sadness upon their sacrifices.

Having accepted the situation, yet ignoring none of the nobler impulses of our nature, with the realities of the present we are now engaged. On this occasion it is, therefore, proposed briefly, and in the plainest language, to call attention to the duties and obligations of educated and scientific men, and some of the circumstances which encourage them to prompt and energetic action. This is not an appropriate time—though ordinarily the occasion might justify and demand it—to indulge in a disquisition upon some theoretical subject. But we must now be practical. We must calmly view the situation, and each and every one of us must appreciate his duty and honestly attempt its performance.

After the devastations of the war educators and votaries of science have much to do in resuscitating old institutions of learning and erecting new ones; in improving the physical condition of the people; in developing the resources, animal, mineral and vegetable, of the country; in diffusing knowledge; in promoting science; in giving direction to plans and schemes for social improvement; in fostering the energies and encouraging the progressive spirit of the people.

Never was there a period when this people were so well prepared to listen intelligently to propositions for their individual and social

improvement, if made by those in whom they trust. Never were a people so habituated to benevolent action or so ready to heartily engage in any good work which many receive the approbation of their judgment.

They have been to school, and under that inexorable teacher, Necessity, they have become more than ever enlightened as to the real value of science and thorough education; and their hearts have been purified, as it were, by fire.

The youth of 1861 are the men of 1866. Circumstances have afforded them opportunities for mental exercise, have enlarged their views, and furnished educational facilities, which, perhaps, no soldiers ever before enjoyed.

For, notwithstanding the theoretical inequality of the private soldier and his officer, the armies of the South were, in camp and upon the march, great social gatherings in which mind met mind, and freedom of discussion and independence of thought were never repressed.

Thus every soldier of honorable impulses and good mental capacity has been educated into a traveled gentleman of enlarged and liberal views, of determination of purpose, of fortitude to endure hardships, of courage to face dangers, and earnestness in the performance of duty.

Such are the men who are to give tone to society among us. Such are the men whose judgments are to be appealed to, and who are to sustain every good work proposed. With them the arts of the demagogue are powerless of harm. They know, better than their predecessors, the value of scientific skill; and such men will not encourage mountebanks or be indifferent to learning and social progress.

The daily habit of benevolence, indulged in, during the war, by men, women and children, by citizens and soldiers, has ennobled, elevated and softened the hearts of the people. Hence selfishness is not respectable; and the rejoicing in each other's welfare and the promotion of each other's happiness, are daily sources of pleasure and means of employment, to an extent hitherto unknown.

And shall we fear that they will cease their good works because,

forsooth, some have taken the thirty pieces of silver and are now clothed in purple and fine linen? No! The comforting recollection of duty, well and honestly performed, ensures perseverance in the practice of charity and stimulates earnestness in the meeting of obligations. They are still ready to second schemes of benevolence and improvement. The signs of the times encourage their advocacy and inauguration.

Never were the white people of the South more homogeneous than now, and their animus upon most subjects is worth preserving. It can be preserved by educating our youth at home, where natural and adventitious causes are constantly in operation to give it exercise, to develop and to cherish it. And it is possible, that they *may* there enjoy the light of science, the privileges of civilization, while preserving the peculiar ethnological features, mental and moral, of a people such as we have described.

Do not understand us as contending that truth is measured by a different standard among us from that which must be used by other enlightened people. From its very nature, its measure is unalterable. Yet every reflecting mind must admit that upon the animus of a people depends, to a great extent, their zeal for the investigation of truth and for its unselfish acknowledgment.

Climate and other adventitious causes, no doubt, aided in giving direction to the out-of-doors observations of Gallileo in Italy, and to the abstruse studies of Newton in England, which unitedly resulted in the revival and establishment of the Copernican theory of astronomy upon the basis of mathematical demonstration.

The true votary of science is cosmopolitan. Observing facts and deriving ideas from the savage Esquimeau, devouring the raw blubber of a seal, or from the Parisian, genteelly feasting upon chemically prepared viands and beverages, he recognizes ethnological peculiarities, which give direction, in various degrees, to investigation and impulse to effort. He knows that climate, the products of the soil, and the pursuits of a people, their interests, their traditions and the customs of the first inhabitants of the country, do, to a large extent, influence their morals and their tastes.

The conquered people of the South having passed under the

yoke and conformed to the terms of the victors, are still the same generous, independent thinkers they ever were. Having won name and fame, they must more than heretofore be distinguishable by their temperament and their social customs.

The natural and artificial causes, which fostered the Puritan settlement at Plymouth, and gave prosperity to the French Huguenots at Charleston, still continue to model and shape, in part, the mental and moral features of the people of the two great sections of these United States. Immigrants into either section and their descendants, will ever continue to be affected by their influence.

From different stand-points, with different opportunities to ascertain correct premises, representative men came to opposite conclusions upon great social and political questions, and hence, the recent sacrifice of perhaps a million of lives and unnumbered woes.

Enough then has occurred and is patent to all, to prove the existence of ethnological differences between the people of the two sections, to persuade intelligent men of the folly of attempting to enforce uniformity of social customs. Without crimination and recrimination, ridicule and satire, why may not every people cherish their own desirable characteristics without demanding that others shall be like them?

If we are convinced that we possess desirable and ennobling impulses and characteristics, let us perseveringly cherish them, and as a means of cherishing them, let us ourselves direct the education of our youth, train our young men and women, and encourage their laudable enterprises.

The war decided against us on two issues and only two, viz: The supremacy of the Federal Government, and the abolition of slavery. Upon all other questions there was no contest. Therefore, our identity as a people is not lost; nor has our right to direct the education of our children been taken away.

To preserve the civilization of the Southern people, to improve it, and to make it felt in the peaceful pursuits of life, is a high and holy task incumbent on our educated and intelligent men and women.

Now is the time to inaugurate their plans and to propose their schemes. The greater the difficulties and the greater the embarrassments, the more food for thought, the more stimulus to effort, and the better the opportunity for the display of genius.

And they have much to stimulate them, even in this time of pecuniary distress and embarrassment. The perseverance of the people, their just appreciation of the good and true, the liberality of their views which engenders a proper degree of docility in the pupil, the combination of causes which tends to develop individuality and independence of thought, the very novelty of the situation, the passing away of old social elements and the advent of new ones, unite to render the task one of peculiar pleasure and responsibility as well as of immediate necessity.

No one capable of exercising influence for good, unless in danger of being dragged to the scaffold where his blood would be uselessly or unjustly spilled—no one whose example and words of counsel would promote the interests of this people, should now desert them.

The man of wealth may have it in his power to emigrate. The distinguished citizen may find employment and have honors heaped upon him in foreign parts; but the great living, toiling mass of the people must stay at home. Here they must find a field of action. Here they must rear their children. Here, too, they must be buried by the graves of their fathers. The exodus of the whole people, even if desirable, cannot take place. Here, then, should all, who can peacefully do so, remain to share a common destiny and to contribute each his mite to the common welfare.

Without dwelling upon the display of brilliant genius, which, for four years, in the field and the forum, aroused the attention of the world, when our Lee and the Johnstons, Beauregard and Bragg, Stonewall Jackson and Hood, and hosts of others were making startling history, or recalling the intellectual achievements of our representative men prior to the war; let us look behind the scenes, where, less patent to public gaze, the corps of scientific men were bidding nature to yield up her treasures and art to shape them into materiel of war. Silently, ungazetted, at their touch, mines and caverns exposed their riches, smelting furnaces and

foundries, unrivalled powder mills, iron works and rolling mills arose as if by magic. These, and those triumphantly successful artificial nitre beds, and superior arms and fixed ammunition, attest the genius, skill and scientific attainments of the officers of the Nitre and Mining and Ordnance Bureaus.

They demonstrated that the Southern States contain valuable and varied resources amply sufficient for the sustenance of the people in peace as well as in war. They have but to assert their claim to the approbation of the scientific world, and that candid tribunal will acknowledge it. For they can, by their achievements in chemical manufactures, in mining and in practical geology, prove a claim to peerage with the scientific corps of any nation. These men should not withdraw their light, but let it continue to be seen, that all may avail themselves of their assistance in diversifying their pursuits, and inaugurating new enterprises.

When the shipping interests of the South become extensive, there will be need for the services of all our Maurys. When the rich veins of ore are to be traced, as soon they must be, the geologist and mineralogist will be sought for. Chemistry, civil engineering, natural history and natural philosophy must all be pressed into the service of the people in aid of the various enterprises into which they will embark. Among the scientific corps alluded to, there are many who can achieve as much in the peaceful pursuits of life as they did in war.

And what shall we say of the medical profession? What is now the duty of its members? The energy exerted, the disinterestedness exhibited by them, and their humane sympathy with the suffering and the dying in past emergencies, give assurance that they have made observations which will promote science and improve the practice of their art.

The whole resources of the revolting States having been required during the late civil war, all the qualified members of the profession friendly to their cause, except those disabled by age or disease, and a limited number imperatively needed at home, voluntarily sought positions in the medical staff of the Confederate armies, and thus strove to fulfill their mission, which is to save and to heal, not to destroy and to wound.

How well they performed their part, time will develop, and history, truly and justly written, will demonstrate. That incompetent and unworthy men intruded themselves among them, the rigid discipline of their branch of the service administered in obedience to their *esprit du corps* undeniably proves. There was no branch of the service in which incompetency was rendered so powerless of harm, and none in which unofficer like conduct was so promptly punished. We venture to assert that no armies so large were ever supplied with as large a proportion of well qualified surgeons as were those of the South during the recent war. Never, perhaps, was the labor of the surgeons so purely one of love for their patients.

Theirs were not ordinary patients, towards whom indifference could be indulged. Nominally soldiers, they were the neighbors and friends of the surgeons. Selfishly viewed, they were links in the chain of defense, no one of which could be spared. Whatever prejudices may be cherished by a few, growing out of ignorance of the duties and responsibilities of army surgeons, the childishness of the suffering, the distress of fond friends and relatives, and the hardships of conscription, it must be admitted, that in general, the sick and wounded were, by them, most humanely cared for and skillfully treated.

Scantly supplied with exotic remedies, indigenous substitutes were fairly tested, precision and exactness, as well as simplicity in prescription, were encouraged, and the effects of treatment carefully noted.

Rarely were better opportunities afforded for observing the recuperative efforts of nature. Never was human endurance so thoroughly tested. Of the medical topography of the country, of the influence of mental emotions and *morale* upon the physical condition of the soldier, the opportunities for observation were numerous and varied. The frequent changes of station, the varied fortunes of the war, and in many instances the continued service of surviving patients and surgeons, from the beginning to the bitter end, corroborate this assertion.

It is an historical fact that, for the most part, the most active and skillful were stationed at the front, on the battlefield, or in



hospitals at convenient distances in the rear, where among the most serious sufferers their services could be commanded. In many instances this character of service was continuously performed during the four years by certain individuals. It is, therefore, no exaggeration to say that there are now living in the prime of manhood among us, surgeons and physicians, whose operative and bedside experience has been rarely, if ever, excelled.

What contributions the surgeons of the late Confederate armies will make to conservative medicine and surgery, remains to be seen. If they are true to their humane instincts and their past history, much is to be expected of them.

May we not hope that they will be permitted to repossess their captured notes and records, that they may collate, arrange and put them into shape for publication in an useful form?

It is the duty of the medical men of the South who have enjoyed such opportunities not to permit private misfortune and the defeat of their cause to deter them from continued exertion in the cause of science and humanity. They must not ignore their obligations. The worthy members of the profession throughout the world have a right to the benefits of their experience. To this end it is desirable that at some early period the members of the profession in the South shall assemble en masse, or through representatives, to devise ways and means of securing a just and truthful history of medicine and surgery in the Confederate armies. Ours is a peaceful calling, and an assemblage of lately rebellious doctors need not excite suspicions of conspiracy against the government in the mind of even the most rabidly radical politician.

So gloomy since the close of the war have been the prospects of pecuniary independence as the reward of the practice of medicine, it is feared that many worthy men have abandoned it. Yet there never was a time when the people of the South were so well prepared to appreciate thoroughly educated medical men.

Such clinical instruction as they have received during four memorable years, has qualified them to appreciate the honest practitioner of medicine.

Circumstances having so long shut out from among them the

wares of the quack and nostrum vender, the worthlessness of this species of merchandise is now generally acknowledged.

The people look with more rational confidence to scientific men to instruct them and to treat their diseases. Now, therefore, more than ever, it is in the power of medical men in the South to elevate the standard of professional qualifications. Now, more successfully than heretofore, they can dictate and enforce many needed reforms in medical education.

The people of the South are an earnest people; they make war in earnest; they make peace in earnest. Whatever calling or pursuit they adopt, they earnestly follow. Soon then, in commerce, shipping, manufactures, mining, the learned professions, they will be competing with the rest of the world for honors and rewards. What may we not hope that clear heads impelled by earnest hearts may achieve in the cultivation of medical science and all the arts of peace?

Men of education and scientific attainments must arouse to activity. Of what they can accomplish in peace, we have assurance from their conduct during war.

The young now are to be trained. Men and women of accomplished education will not the less be ornaments to society if they assume the task of "teaching the young idea how to shoot," and thereby furnish those facilities, which have too often hitherto been sought abroad.

Amateurs of science must no longer, in the study, selfishly gloat over their intellectual treasures, and, miserlike, be unprofitable members of society. But upon the hills and the mountains, in the valleys and on the waters, they must be found actively employing their talents for useful purposes.

The votaries of medicine propose to appropriate scientific truth / to preserve health and relieve human suffering.

To study science and to learn this art is the object, Gentlemen, of your sojourning here.

So honorable did the ancients esteem the medical art, that they denominated it divine, and deified its first professor of whom we have any account.

You live at a time, and among a people, who have, comparatively

speaking, divested themselves of superstitious ideas and observances. For now, more than ever heretofore in this Southern land, has the veil of mystery been removed from our art. Men have learned to regard it as based upon scientific truth, and requiring the exercise of strong common sense in its application.

The worthy members of the profession justly make certain demands of you before permitting you to claim a peerage with them. The populace, as before stated, have more adequate and just views than formerly, of the necessary qualifications of a medical adviser.

Among these qualifications are accuracy of information, a well balanced mind, and integrity of character.

Willful or voluntary ignorance is among the worst of crimes, and the student proposing to assume the weighty responsibilities of the physician, that neglects opportunities to qualify himself, is, mayhap, preparing to criminally destroy human lives.

He who cultivates not the judgment, and fails to reason and reflect, is not fit to approach the bedside of human suffering.

He, who with dishonest heart, enters upon the study of medicine, aware that knowledge is power, and with malice prepense, determines to use the knowledge acquired for base and criminal purposes, is an enemy to civilization, to human progress, and to human happiness.

But he, who docile and earnest and honest, with well balanced mind approaches the temple of science, vowing to devote his time and talents to the relief of human suffering and the promotion of human progress, has promised him a rich reward (if not in this world's wealth), in the ineffable pleasure of reflecting, at the end of his career, upon a life well and usefully spent.

Peculiar duties now devolve upon you. You have much to do in preserving the respectability and usefulness of our profession. Great events have recently transpired, in which, perhaps, many of you were energetic actors. In your peaceful calling you may still expect to find ample opportunities for the exercise of generous impulses, and for thought, in advising and co-operating with those around you, who may be laboring to promote social progress and improvement. Your sympathies will find ample opportunities for cultivation in administering to the relief of human suffering.

In the re-opening of the various institutions of learning in the South, you have additional evidence of the recuperative energies of our people.

In appealing to the educated and scientific men of the land, and recalling some of their history, it has been our design to indicate to you in part your duty, and to stimulate you by their example. For the obligations of the student are similar to those of the graduate. With the earnest effort to meet those obligations, you have much to encourage you.

Believing that medicine, in its various branches, can be as well taught in summer as in winter, and in times past, having demonstrated that the dry atmosphere of this city—it being one of the most elevated points of railroad grade between the Gulf and the Tennessee river—favors the perfect preservation of anatomical material throughout the year, knowing that the long days of summer afford many advantages for experimental vivisections, for teaching minor surgery, for demonstrations with the microscope, for clinical instruction, and the exhibition of vegetable *materia medica* in a growing state, in concurrence with the wishes of many respectable members of the profession, the faculty of this institution have determined to deliver two courses of lectures each year. Thus they propose in eighteen months to give students who desire it, the privilege of attending three courses of lectures instead of only two, as heretofore.

In imposing this additional labor upon themselves, they believe they are acting in accordance with the spirit of the times, which demands that the halls devoted to science shall be always open, and its votaries continuously at work. Henceforward those spacious halls will be open for the benefit of the student throughout the year.

We want no idlers there. In the lecture rooms and in the private class, your teachers expect to work. The wisdom of the policy adopted can only be vindicated by the qualifications and characteristics of the graduates sent forth. Let no one, therefore, suppose that while affording additional facilities, this institution can or shall be used as a means of degrading our profession.

To the faculty a sacred trust is committed, which they can only

honorably use to promote science and secure the humane objects of practical medicine and surgery.

They are in earnest when they bid me charge you, who seek the honors of the institution to faithfully do your whole duty, and thus earn the right to claim a respectable position in the ranks of the profession they desire to truly represent.

Amid associations so suggestive of duty, having so many traditions to excite our pride, and honorable examples to imitate without envying the more fortunate, or making invidious comparisons, may we not nerve ourselves to effort, and hope to sustain here an institution of which no scientific man shall be ashamed, and on account of which no Southern man shall have just cause to blush?

Impressed with the responsibilities of the hour, and acknowledging their obligations, while bidding God speed to other honorable enterprises intended to elevate and instruct our people and to diffuse useful knowledge, the guardians of the fair fame of this institution enter upon the labors of the present course, desiring to earn the approbation of their peers, and determined to use every expedient that may tend to ensure thoroughness in teaching, and to adopt that policy which in their opinion is best calculated to elevate the standard of professional excellence. They do not expect to confine their efforts exclusively to teaching by didactic lectures, but by frequent, thorough and searching examinations to stimulate thought and investigation, and to inform themselves thereby of the qualifications of the student at the various stages of his progress in science. This is an age of improvement, and the routine observed by our predecessors of more than half a century ago, is not necessarily binding upon us.

That sickly, not to say silly philanthropy which neglects necessities at home because the sphere of operation is not a whole nation or the whole world, rarely works out useful results. In the home circle is laid the foundation of the happiness of the community. The improvement of communities elevates the nation, and contributes to the aggregate of human progress.

Pretending not that in the South science can be cultivated more successfully than elsewhere, yet denying any inferiority of oppor-

tunity on the score of locality, here we find a field for usefulness, promising a fruitful harvest, and affording many stimulants to effort. Our mission as citizens of the world can best be fulfilled by meeting our obligations at home.

If these views are correct, the duty of educated Southern men is plain. They should assist in gathering up the *disjecta membra* of society, and in their respective spheres do their appropriate work in the business of reparation and recuperation. Operating upon and among a people in sympathy with them, whose idiosyncrasies and ethnological peculiarities they understand and appreciate, they can exercise a larger influence for good at home than elsewhere. Cementing the various elements of society by cherishing ennobling impulses, and judiciously encouraging laudable enterprises, they can contribute to the happiness of those around them, while they add largely to the sum of human happiness, and advance the general cause of civilization and human progress.

Animated by such views of duty, the people of the South can retain their identity and self-respect, and work out for themselves a prosperous future.

Let us then to work. Let us not despair.

"Of chance or change, O! let not man complain,  
Else shall he never, never cease to wail;  
For from the imperial palace, to where the swain  
Rears the lone cottage in the silent dale,  
All feel the assault of fortune's fickle gale;  
Art, empire, earth itself to change are doomed,  
Earthquakes have raised to heaven the humble vale  
And gulfs the mountain's mighty mass entombed,  
And where the Atlantic rolls whole continents have bloomed."

But rather let us courageously buffet waves of present adversity as a means of cherishing a lively hope of future happiness. For

"The man who consecrates his hours,  
By vigorous effort and an honest aim;  
At once he draws the sting of life and death,  
He walks with nature, and her paths are peace."

## ARTICLE III.

*Extracts from the Introductory Lecture delivered at the opening of the session of the Medical College of Georgia, on the first Tuesday in November, 1865, by THOMAS S. POWELL, M. D., Professor of Obstetrics and Diseases of Women and Children.*

This is no ordinary occasion. It is an era in the life of the Atlanta Medical College. For four years her walls have been filled with sick and wounded soldiers. Erected as a retreat where the theories of medicine could be quietly taught, it has been used for the practical purposes of the profession. Her halls, once vocal with the busy hum of student life—the earnest lecture, the gay jest, the merry laugh, have echoed the groan of the wounded soldier dying away from home, from kindred and from family.

Our Faculty have been separated during the period referred to. Some have been engaged ministering to the wants of a suffering army—their places of labor transferred from the lecture-room to the hospital; others have been engaged in the less conspicuous but still arduous duties of private practice.

All, we trust, have done their duty in the different fields in which they have labored, and through the merciful and kind care of an overruling Providence, the lives of all have been spared.

All, save two, are still here, with renewed energy, and with lofty purpose, determined to do their duty, to the best of their ability, in fitting you for the responsible duties of your profession.

It is with profound regret I have to announce that two of our number have been compelled, on account of impaired health, to resign their chairs. It is with sadness and disappointment that we part with them. We had hoped that the growing fame of the one, and the sage wisdom and experience of the other, would long reflect honor on our institution. The comparative youth and brilliant career of the late Professor of Anatomy, as a teacher and a surgeon, led us to expect for him a long life of honorable usefulness among us, and a steadily increasing fame and reputation.

It is the earnest hope of his former colleagues, that his health, shattered by the exposure of the battlefield and his close application to hospital duty, may soon be restored, and that he will speedily return to the profession for which he is so eminently fitted. If, in the providence of God, this should be the case, we predict for him a brilliant and successful future. In regard to our honored friend, the late Professor of the Science and Practice of

Medicine, I would say that it is still our hope that his voice may occasionally be heard within the walls of the Institution to which he has been devoted, and around which his affections still cling, as we still claim him as one of us, if he is not able to be with us, having had assigned him by the Faculty the honorary position of *Emeritus Professor*.

In the darkness which it has pleased an all-wise Providence to bring upon him, he has our deepest sympathy, and we earnestly hope that he may be richly endowed with the light of that Spirit which will comfort him here, and illuminate his soul's pathway to a brighter world on high. May he be resigned to the sad dispensation which has befallen him, in the hope of a blessed immortality.

With respect to the gentlemen who have been selected to occupy the vacant positions, I should, perhaps, be lacking in delicacy and good taste, were I to say much in their favor. I would, nevertheless, remark that they are in every particular worthy to occupy the chairs which have been so ably filled, and by the faithful performance of the duties of their respective positions, they will no doubt prove themselves capable and worthy successors to honored predecessors.

This is an important era to you, gentlemen. It is especially important in the case of those of you who have never as yet attended a medical course. You have recently chosen your profession in life. It is a noble and philanthropic calling—one, as you know, requiring many sacrifices. Practiced with a proper appreciation of its duties, it is refining and exalting in its tendencies, and wins the respect and confidence of all intelligent communities. All the human sympathies are excited; there are constant opportunities for doing good; frequent calls for self-denial. You, looking forward with the imagination of youth, perhaps, see only the flowers in your pathway—bright suns, roseate hues or unclouded skies; verdant hills and luxuriant fields; friends to assist, and admirers to applaud—eagerly grasping, in anticipation, the laurel wreath of future distinction. But who can foretell your destiny? Far be it from me, however, to utter one word that would repress, in the slightest degree, the ardor of aspiring youth. But I feel that I would not properly discharge my duty as an instructor, as a friend to the country at large, if I did not warn you against commencing the study of a profession so highly responsible as the one in which you are now about to be engaged, without a full determination to use all your exertions to take advantage of all the opportunities presented for medical instruction; if I did not tell you that you had chosen this day a course of life full of thorns,



hardships, sacrifices and difficulties; if I did not tell you that a toilsome pathway lies before you; and if I did not tell you at the same time, that at every step of the ascent you will find cheering compensation for the laborious effort incessantly necessary.

Many of you, owing to the stern life you have led, the cares, the dangers and vicissitudes of soldiers' duties, are better prepared for the realities of life that await you, than young gentlemen of your age usually are. You well know that in the life of a soldier the early training is all-important. Those men who have had the severe drill and careful training of a well conducted camp of instruction, are much better prepared for the active campaign than those who have no such training. It is all-important that you be well drilled here—it is all-important that you begin properly; your future success depends on your devotion to your studies here. It is necessary that you begin with correct principles and rules of action.

It is almost certain that the plan of study, the mode of thought, the peculiar habits of investigation and observation adopted by you here, will be continued in after life. If you observe and think closely now, you will observe and reason closely hereafter. The student must not skip his difficulties; he must conquer them. He must begin by times this noble habit, this only guarantee of ultimate success, while the opportunities are in his power.

Once contract a careless method of study, an eagerness to get on without having heaved the lead every inch of progress; without having, step by step, felt his way; without digesting each lecture, and assimilating it to the store of knowledge already thus laid up; once let a man's ostensible improvement outstrip his intrinsic and real one; let his knowledge, so far as it reaches, be unstable and only half acquired, and the man is undone. Each fresh conquest and acquisition must be secured forever to the mind by the grappling iron of frequent repetition.

So long as superficial qualifications satisfy the medical student's ambition, he has not the adequate inducement to undergo the labor which is the purchase money of all acquirements that are valuable and solid. He cannot take the boon and shirk the condition. Fame is the reward of toil; and he is indeed deceived who expects to command resources without the trouble of acquiring them, or to rise to eminence upon a bed of roses, or to win, without an effort, that laurel-wreath which crowns none but those who earn it by their diligence.

"Love, fame, esteem, 'tis labor must acquire;  
The smiling offspring of a rigid sire."

He, therefore, who would attain to eminence, must keep pace

with the progress of medical science. As the age moves onward, he must move on with it, or be left behind. But whilst ignorance, in a period of such general intelligence, would indeed be a reproach to almost any man, let it also be remembered that unusual efforts are required of those who aspire to rise above mediocrity, or to shine with superior lustre in the medical firmament. They, and they only, can hope to be stars in an age like this, of whom it may be truly said, as regards their preparatory course,

“See how the matchless youths their hours improve,  
And in the glorious way to knowledge move,  
Eager for fame, prevent the rising sun,  
And watch the midnight labor of the moon.”

But while one poet thus stimulates your ambition to excel in learning as the only sure groundwork of power and distinction, another urges impressively the important truth that

“Not in mental but in moral worth  
God excellence placed, and only to the good,  
The virtuous, grants happiness below.”

However desirable, therefore, it may be to be distinguished, it is infinitely more important to be virtuous. The pillar whose base has no foundation, can give no support to the dome under which its head is placed. The pioneer's work must be done well if the steep and difficult paths to

“Where Fame's proud temple shines afar ”

are to be conquered.

While you are for a time dependent, to a great extent, upon us for your opinions, we desire you to reason closely upon what we teach. I can, however, assure you, gentlemen, that medical science is founded upon incontrovertible facts. Anatomy, the corner stone of medicine, is itself a science of facts; its principles are true to a demonstration.

For a long time our fathers groped in darkness. Medical men studied Anatomy by stealth. Indeed, among the ancients there was, by certain sects, a great deal of ridiculous wrangling as related to the utility of a knowledge of Anatomy. But some persevered and developed fact after fact, and finally Harvey discovered the circulation of the blood, and the wonderful uses of the heart, and traced the movements of the life-giving fluid carrying its nitrogen and oxygen to the exhausted tissues of all parts of the body. This gave a new and mighty impulse to the science, and settled many questions that had before been puzzling enigmas to medical men. And, to-day, Anatomy stands more complete in its details than any of the physical sciences, and, among scientific medical men, not a doubt of its value, as relates to medicine, is

for a moment ever seriously discussed. But yet, as important and essential, as indispensable as the knowledge of Anatomy is, it is amazing how much it is neglected by a majority of students. I hope, young gentlemen, this will not be the case with you. Let it sink into your hearts and be thoroughly impressed upon your minds, that every man who loses a patient without a correct knowledge of the structure of the human frame—the form, size, situation and relative position of the different organs in a healthy state, and the mutations which are produced by disease, and which alter the color, shape and relations of the parts as well as their structure, is morally responsible for the life of his victim—for victim he is to the ignorance of the physician to whom he entrusted his life. But, young gentlemen, there is no reason why any of you should incur so fearful a responsibility, because you will have abundant opportunities here for the study and attainment of Anatomical knowledge, and nothing but patient perseverance and industry are necessary on your part in order to secure it; and, believe me, without a knowledge of this branch of medical science, your labors for medical attainment and distinction will be comparatively in vain.

Physiology is based on a knowledge of the structure of the human organization, and teaches the vital functions of that organization—a beautiful and sublime study which, it is true, is not reduced, in every particular, to anything like positive precision, but yet, in its leading principles, it is a settled and complete science, a thorough knowledge of which is absolutely necessary to enable the practitioner to triumph over disease. Rapid as has been the march of this department of medical science; brilliant as the conquests have been made by its cultivators, there are yet trophies in reserve for the persevering student. All the laurels have not yet been won. It is for you to investigate these principles, and for some of you, I trust, to discover and develop new truths. We are wiser than those who have passed away. Every generation adds to the stock of human knowledge; and however the case may be with individuals, yet with the species there is no doubt that man, generation by generation, grows wiser and wiser. In the discovery of every new truth there is increase of knowledge, and every fresh fact that is discovered concerning the mysteries of the universe, or of the economy of the human system, is a clue leading from the very chambers of knowledge, which the discoverer leaves behind him to guide his followers. It is never lost; it marks the spot up to which he had arrived, and his experience serves us instead of knowledge; for we may at pleasure take up the thread and commence where he ended, lead where it may.

Therefore, gentlemen, because knowledge is progressive ; because you are young and fresh in the race upon this sea of life ; because you have the experience of the great lights that are now shedding their concentrated radiance upon your path, we have reason to expect of you conquests still more brilliant than even those that have adorned the records of the past.

You may say that there are no unexplored fields—that industrious laborers have wrought in them all. But you need not labor in untried fields. The gold digger of to-day applies new machinery and new systems in his mining operations to gold fields long abandoned as exhausted and worthless, and gathers rich rewards for his labor. Strive, then, for yourselves. Where others have reaped fifty fold, you may reap an hundred fold.

It sometimes happens that a medical agent does not receive the attention it should from the profession, when some one-idea man takes hold of it and develops new therapeutical applications. Learn, gentlemen, from all such. There are many plants, native to our forests, which are not appreciated as they should be. Your attention may be called to them by persons who know nothing of the principles of botany and materia medica. You may gain something from the most ignorant. The man who thinks the moon no bigger than a cheese, may suggest some idea from which the thinking man elaborates some important truth. Therefore, young gentlemen, never allow yourselves to become prejudiced against a medicine, or any remedial agent, because it is claimed or used by quacks. Rid yourselves from all false pride and pretensions ; stand on the firm foundation of common sense ; direct your time and efforts to the search after truth, wherever it may be found.

And now, gentlemen, ere I close my remarks, I would say that nothing conduces more to the happiness and peace of mind of the physician than the consciousness that he has done his duty well. When the eve of life approaches, and the setting sun beams its last ray over us, how pleasant it must be to feel that suffering humanity has been benefited at our hands. We should, therefore, during our days of activity, remember our duties and perform them well. Something more ennobling—something of greater value than the love of lucre should actuate us to pursue the professional path we have chosen. When the pallid sufferer lies groaning on his bed, the mere knowledge that by his suffering we profit, should not induce us to attempt his cure. Sympathy for his affliction should spring unbidden in our hearts, and the same feelings which would arise from the sufferings of a brother, should be engendered in us towards any fellow-creature.

## CORRESPONDENCE.

## ARTICLE IV.

*Report of nine cases of gun-shot wound of the elbow joint, with partial or total excision in seven cases.* By J. J. KNOTT, M. D., Surgeon late Confederate army.

Such has been the success attending excision of the elbow joint, that it has become, of late years, an operation of very frequent performance. Though we are sorry to say that during the past war, this operation was often discarded either through the ignorance or prejudice of the surgeons, and that of amputation substituted, being the means not only of increasing the lists of mortality, but depriving the men of useful limbs.

Experience has conclusively proved to us, that the dangers consequent upon excision of this joint, in the majority of instances, are very slight. A great many army surgeons, I am aware, raised serious objections to excision on account of the distance it was often necessary to transport the patients in ambulances. According to our experience and observation, the patients who had submitted to excision, bore transportation much better, in every respect, than those who had undergone amputation. It is concluded by some surgeons that where the medullary canal of the humerus is involved in the exsection, that the dangers of diffuse suppuration and pyemia are increased. While we willingly admit that this may be the case in caries and other diseases of the osseous system, we must emphatically deny that such is the case in operations following gun-shot wounds. Again, great stress is laid upon saving as much bone as possible. Authors contend that the use of the limb will be increased in proportion to the amount of bone spared. Here, again, is another point calculated to lead the inexperienced into error. We never have, except in one instance, (case No. 7) been satisfied in removing less than the whole articular surface of the joint; and we will here state,

that in those cases where we removed the condyles entire, we had the most favorable recoveries. So, while the operator should be careful and not remove too much bone, he should be equally impressed with the important fact of not leaving too much. As regards the manner in which the incision should be made, we find a diversity of opinion existing amongst writers upon this subject. Morean, the first to put this operation into practice, used an H incision; while Park, the one that first suggested it, employed a simple longitudinal incision; while by others, different modes of procedure have been adopted. In our judgment, where the operation is called for in consequence of disease of the joint, the operation should be modified by the operator to meet the exigencies of the case. Now in gun-shot wounds, of which we write more particularly, we have followed the simple procedure of Park, i. e., the longitudinal incision. The following is the manner in which we have generally proceeded in this operation:

The patient being placed upon his back on the operating table, is completely anæsthetised, after which he is placed upon his side opposite to injured limb, and retained in this position by an assistant. The arm is then brought over the edge of the table and held in a semi-flexed position by an assistant; I then commence my incision one half inch below the line of articulation, between the bones of the forearm and humerus, extending my incision upwards, on a line, and directly over the olecranon process of the ulnar, the distance of four inches above the commencement cut of the incision; the last half inch extending through the integument only. After carefully dissecting the ulnar nerve out of the groove on the internal surface of the olecranon process and its trochlea on internal condyle, and putting it aside by means of a blunt hook or the handle of an ordinary scalpel, we divide the tendon of the *triceps extensor cubiti* and the ligamentous attachments of the point. Now by forcibly flexing the arm, we are enabled to divide the attachments around the bones of forearm sufficiently to remove their articular surfaces, which should be done with the saw (either chain or amputating) and not with the pliers, as recommended by authors, as the bones are very often crushed through instead of cut by this means. We next proceed to the removal of

the condyles, which is done by means of the saw, after they have been sufficiently cleared of their attachments. Care must be taken in our dissections not to wound the anterior brachial muscles, as they are still to fulfill their important functions, as well as danger of wounding the brachial artery. After clearing the parts of all extraneous matter, the lips of the incision are approximated by means of the interrupted sutures, with intermediate strips of adhesive plaster; cold water dressings applied, and the forearm retained in a position at right angles with the humerus by means of two angular splints, applied latterly and retained by a roller bandage extending from hand to upper part of splint, we need have little fear of ankylosis, provided passive motion is properly employed.

CASE No. 1.—Corporal P——, Company “E,” 53d Georgia Regiment, Semmes’ Brigade, McLaws’ Division, Longstreet’s Corps, Army Northern Virginia; aged about thirty; dark hair; dark complexion; and by occupation, previous to enlistment, a farmer. Received in the battle of Chancellorsville, Virginia, a gun-shot wound through right elbow; the ball passing transversely through the joint, fracturing both condyles and olecranon process of ulnar.

*Operation.*—Removed both condyles with the olecranon process and head of radius.

*Result.*—Patient recovered with useful limb.

CASE No. 2.—First Sergeant, Company —— Regiment Pennsylvania Volunteers; aged about twenty-five years; light hair; fair complexion; and by occupation, previous to enlistment, apothecary. Received at the battle of Chancellorsville, Virginia, a gun-shot wound through left elbow, fracturing both condyles.

*Operation.*—Removed both condyles, olecranon process and head of radius.

*Result.*—I saw this patient seven days after the operation, at which time he was doing finely, and I have no doubt recovered with a useful limb.

CASE No. 3.—Sergeant A——, Company “A,” 53d Georgia Regiment, Semmes’ Brigade, McLaws’ Division, Longstreet’s Corps, Army Northern Virginia; hair light; complexion fair;

and by occupation, previous to enlistment, a farmer. Received in the battle of Gettysburg, Pennsylvania, a gun-shot wound through right elbow, fracturing both condyles, olecranon process and head of radius.

*Operation.*—Removed both condyles, olecranon process and head of radius.

*Result.*—Patient recovered with useful limb, and afterwards died, while a prisoner, with "typhoid dysentery."

CASE No. 4.—Private J——, Company "B," 53d Georgia Regiment, Bryant's Brigade, McLaws' Division, Longstreet's Corps; aged eighteen years; health bad; complexion sallow; hair dark; and by occupation, previous to enlistment, a farmer. Received in the assault on Fort Sanders, Knoxville, Tennessee, a gun-shot wound (flesh) through right arm, some three inches below the shoulder. Not leaving his command for this, he received a second through the left elbow—the ball entering some two inches below the articulation of the elbow on the radial and outer side, and passed obliquely through the joint, producing a fracture of radius and both condyles.

*Operation.*—Removed three inches of the radius and both condyles, with olecranon process of the ulnar.

*Result.*—Patient recovered with a useful limb.

CASE No. 5.—Private H——, Company "C," 53d Georgia Regiment, Semmes' Brigade, Kershaw's Division, Longstreet's Corps; aged seventeen years; health good; hair dark; complexion fair; and by occupation, previous to enlistment, a farmer. Received at the battle of Berryville, Shenandoah Valley, Virginia, a gun-shot wound through the right elbow, fracturing both condyles and olecranon process of ulnar.

*Operation.*—Removed both condyles and olecranon process of ulnar.

*Result.*—Recovered with useful limb.

CASE No. 6.—Lieutenant B——, color bearer, 51st Georgia Regiment, Semmes' Brigade, Kershaw's Division, Longstreet's Corps. Received during the battle of Cedar Creek, Valley of Virginia, a gun-shot wound through the left arm, fracturing both condyles.



*Operation.*—By request of my friend, Surgeon E. M. Watt, I operated on this case. I removed the condyles and olecranon process.

*Result.*—Recovered with useful limb.

CASE No. 7.—Sergeant P——, Company "B," 53d Georgia Regiment, Kershaw's Division, Longstreet's Corps, Army Northern Virginia; hair dark; complexion fair. Received at the battle of Cold Harbor, June 1st, 1864, a gun-shot wound in right elbow, fracturing olecranon process, and laying the joint open.

*Operation.*—Removed olecranon process, and approximated edges of wound by means of the interrupted suture.

*Result.*—Recovered with complete ankylosis of the joint.

CASE No. 8.—Private C——, Company "I," 53d Georgia Regiment, Semmes' Brigade, McLaws' Division; health good; hair light; complexion fair; and by occupation, previous to enlistment, a farmer. Received at the battle of Sharpsburg, Maryland, September 17th, 1862, a gun-shot wound through the right elbow, fracturing both condyles. The patient refusing to submit to an operation, I removed the smaller fragments of bone and sent him across the river.

*Result.*—Recovered with complete ankylosis.

CASE No. 9.—Private S——, Company "C," 53d Georgia Regiment, Bryant's Brigade, McLaws' Division, Longstreet's Corps; of robust constitution; complexion fair; hair light; and by occupation, previous to enlistment, a farmer. Received, November 29th, 1863, in the assault on Fort Sanders, at Knoxville, Tennessee, a gun-shot wound in right arm; the ball entering three inches below the articulation of the elbow, and directly over the interosseous space—ranging upward—and becoming impacted between the two condyles. After enlarging the point of entrance, with a bistoury, I succeeded, with an elevator and ball forceps, in removing the ball. This patient was left in the hands of the enemy, in charge of my friend, Assistant Surgeon J. F. Cotton. He informed me that the patient recovered without ankylosis.

*Recapitulation.*—We have here nine cases of gun-shot wounds in elbow joint. In six, total excision was practiced; five of which we know to have been entirely successful. One—the Federal

soldier—I am confident, from what I saw of him on the seventh day after the operation, made a good recovery. We then have one case in which the olecranon process alone was excised. We are satisfied, from what we saw of this case in 1865, that total excision would have been much better for the patient, and reflected more credit on the operator. The same would have been the case in No. 8. In case No. 9 the patient was exceedingly fortunate in recovering without ankylosis; though had we a similar case, we should treat it in a like manner, leaving exsection for an after consideration, as all patients have secondary excisions much better than secondary amputation. It may be asked what are the contra indications in excisions of the elbow joint? In our opinion resection should never be resorted to under the following circumstances:

1st. When we have division of the ulnar nerve.\*

2d. When the principal blood vessels are injured to such an extent as to destroy their functions.

3d. When extensive injury to the soft parts has taken place.

4th. When the fracture of the humerus, radius and ulnar is so extensive as to render the arm useless, should the patient survive the operation.

Griffin, Georgia, March 20, 1866.

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\* We saw a man from Wofford's Brigade appear before the Medical Examining Board of McLaws' Division, in 1864, for retirement, upon whom the elbow had been excised. The arm was nothing but an incumbrance to him, owing to division of the ulnar nerve.

## SELECTIONS.

*Trichinæ and Trichinosis.* By CH. EYRICH, M. D., of Newark, New Jersey.

In consequence of the recent repeated occurrence of a peculiar disease, caused by the introduction into the human body of parasitical animals called *trichinæ*, this subject has again attracted the attention of the profession; and, although I have no observations of my own to offer, a review of some of the leading facts connected with the growth, development, and migration of *trichinæ*, and the disease termed *trichinosis*, will perhaps be of interest. My sources of information are derived chiefly from recent publications in German.

*Anatomy and Development of Trichinæ.*—At a meeting of the Society of Physicians of Vienna, January 19th, 1866,\* Dr. Wedl spoke at length on the anatomy and development of trichinæ. The first discoverer of trichinæ was Hilton, of England, who found them imbedded in the muscles of a cadaver, but believed them to be ecchynococci. In 1835, Richard Owen found in some muscles a worm, rolled up cork-screw fashion, which, from this circumstance, he named *trichina spiralis*.

Regarding the sexual development of these animals, observers were for a long time in the dark. Siebold looked upon the muscular trichina as some other worm in an undeveloped state. Later, it was thought to be identical with trichostoma or filaria. Virchow first recognized and described the true sexual development of this animal; Leuckart added to our knowledge of its anatomical relations, while Zenker, by his well-known case, shed light upon its pathological significance. Fuchs and Pagenstecher have since then contributed accurate anatomical descriptions of the animal.

It possesses an elongated cylindrical body, tapering toward the head, and thicker at the other extremity. This thread-like form has essentially caused it to be confounded with the filariæ. Its skin is striped and curled. The digestive tube begins at the head, dilating in the centre into a sort of stomach, and terminating at the caudal extremity into an anus. At the anterior surface of the body there is an accumulation of cells, which might erroneously be taken for ovaries; more careful investigations have shown them,

\* Medic. Neuigkeiten.

however, to be secretory organs, probably the sudorific glands of the animal; at the posterior surface, on a level with the stomach, there are also glanular organs, in which probably the secretion of digestive fluids takes place.

The female, about a third larger than the male, possesses near the extremity of the head a tube representing a vagina; this dilates into a uterus, terminating in ovaries. In the uterus the ova are found imbedded, containing the embryones in capsule, and where they are brought to maturity; the trichinæ hence are animals giving birth to live offspring. The male presents at the caudal extremity a common cloaca, which separates into rectum and penia. A further examination of this cloaca leads to traces of a vas deferens, the vesicula seminalis, and the testicle. Coition is accomplished by the male winding itself around the female, and evacuating the semen into the vagina of the female. The development of the embryo takes place in this manner: That the contents of the ovum, at first containing but one granulated nucleus, after fruition separates into yolky spheres. The embryo at first has a pear-shaped, subsequently a cylindrical form. After the living embryo has been discharged, the migration commences, and is particularly aided by the form of the animal. With its thin anterior extremity it makes perforating boring efforts, and in this manner it slides easily through the smallest interstices of the tissues. Commonly, the direction of travel is along the fibres of the areolar tissue. Exceptionally, it may happen that a trichina gets into the current of the blood, and is carried by it to remoter parts; as a rule, however, the muscles are reached in the manner first noticed.

Here a further metamorphosis takes place by its becoming surrounded with a capsule. Imbedded in this calcareous capsule, within the continuity of the muscular fibres, the animal continues to live and becomes sexually developed. If the incapsulated muscular trichina reaches the stomach, observation teaches that the calcareous capsule becomes dissolved and destroyed. But the animal, freed from its envelope, continues to live, propagates and give rise to trichinosis.

*Mode of Migration, etc.*—Dr. Furstenberg, Professor of Zoology, and author of an excellent treatise on the *acarus scabiei*, has experimented since 1863 on the manner in which the embryos of trichinæ travel to their ultimate habitation in the primitive bundles of the voluntary muscles. The following are the main points of his researches:

The intestinal walls are always perforated by the trichinæ embryones, in order to reach their place of destination. But they

do not always perforate the three coats of the intestines. A part of them pierce only the mucous and muscular coat, and then move along the connective tissue of the two laminæ of the serous coat, which form the mesentery, upward toward the spinal column, thence continuing their migrations to the muscles. Those embryos which perforate all three coats reach the free surface of the peritoneum, whence they start on their further journey.

As long as the migration of the trichinæ from the guts to the muscles lasted, trichinæ embryos were always found in the free space of the abdominal cavity. They were never found absent during the first thirty days of feeding the animals experimented on with trichinous meat, which confirms Virchow's and Leukhart's theory of trichina migration. Neither in the chambers of the heart, nor in the blood-vessels, have embryos or fully developed trichinæ been found, if the examinations were conducted with proper care. In blood coagula Fuchs has sometimes found that they had originally been there and not got there by accident.

The occurrence of trichinæ in the mesenteric glands is easily explained from the circumstance that the embryos, as stated, travel frequently between the layers of the mesentery upward toward the spinal column; hence they need not first enter the lymphatics in order to reach the glands situate between the laminæ of the mesentery.

*History, Pathology, etc., of Trichinosis.\**—Zenker's case, fully described and analyzed in 1859, fixed the diagnosis of the disease, and soon other cases were recognized, and former anomalous cases which had been looked upon as typhous or blood intoxication, were recognized as cases of trichinosis.

In 1860, at Karbach, three persons sickened from the use of trichinous meat. A case occurred at Detmold, which was thought to be a case of poisoning. The first endemic broke out at Plaven; was observed and described by Böhler and Königsdörfer, and here the diagnosis was settled by finding the muscular trichinæ through the means of harpoons. Nineteen or twenty persons sickened, of whom one died. Since then the Kingdom of Saxony, as well as the Province of Saxony, seem to have been the focus of infection. A case of trichinosis was also carefully observed and described by Friedreich, of Heidelberg. In 1863, a slight endemic occurred at Rugen. About this time Langenbeck's case attracted much attention. He extirpated a cancrroid tumor from the occipital muscle, and in the tumor, when opened, *trichina* were found in large numbers. The origin of this trichinosis was traced

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\* Dr. Roll's lecture before the Society of Physicians, Vienna.

back to a dinner party, at which the patient was present, nine years previously, and after which all the participants had sickened. At the time, the landlord had been accused of poisoning the wine. But this subsequent operation brought the whole event to a clear light. During the second half of October, 1863, a trichinæ epidemic broke out at Hettstadt, one of the most extensive and severest which ever occurred. Of one hundred and fifty-nine cases, twenty died. This endemic has been minutely detailed, and it was remarkable, that while the compositors in the printing establishment at Hettstadt were engaged with Ruppercht's brochure on the subject, a second epidemic broke out among them. Since then cases of trichinosis were observed at Leipzig, Berlin, Guedlinburgh, mostly traceable to the use of *raw* sausage meat. In Hamburg a sailor, coming from Valparaiso, sickened of the disease and died. From British India a case of trichinosis has been reported. At the close of 1865 the disease broke out at Hadersleben. The mortality here reached a very high figure. Of three hundred and three cases, ninety died; and twenty are yet reported to be down beyond hope of recovery. A remarkable feature in this endemic is, that fatal cases occurred as early as during the first week of sickening, while ordinarily, they do not occur before the third week. This is owing probably to peritonitis, and intense lesion of the intestines, from the large number of trichinæ introduced. At the commencement of this year the endemic broke out at Wecksdorf, on the frontier of Saxony and Bohemia. Trichinosis was here demonstrated by harpooning. Kuchenmeister discovered it in the case of a woman, Klob in that of a man.

The perforation of the intestines, and final perforation of the peritoneum, cause irritation of the intestines and peritoneum, which lead to inflammation. A careful study of Furstenberg has led to the reason why these inflammations have been so differently estimated by various observers. In some animals on which experiments were made to determine the migration of trichinæ, and which died, the inflammation was found so slight, that it could not be considered as the cause of death; in such cases it is not improbable that when the intestinal walls were perforated lymphatics may have been opened into, through which morbid substances were conveyed into the current of the blood, causing death. The peritonitis was generally marked by the presence of a certain quantity of reddish, turbid liquid in the peritoneal cavity, and trichinæ embryos were found in this extravasation. Upon the free surface of the peritoneum, embryos were always found in greater or less number.

*Symptomatology.*—Regarding symptomatology Dr. Roll divides

the disease into three stages: 1st, stage of immigration; 2d, stage of digression; 3d, stage of regression. Death may occur in the first stage from peritonitis and enteritis; in the latter stages, death generally ensues from metastatic pneumonia, in consequence of venous thrombosis. The pain in the muscles, and the flexed position of the extremities are characteristic, probably because the trichinæ possess a predilection for the flexors; furthermore, œdema in consequence of disturbances in the circulation.

*Treatment.*—Regarding *therapeutics*, the picrimic salts, oil of turpentine, benzine, and also various anthelmintics, have been found useless. The best effects were derived from cathartics, at the commencement, especially calomel, in large doses, up to a scruple; later, quinine and iron.

*Etiology.*—In regard to the *etiology* of trichinosis there is no doubt. It is positively known that the infection takes place by trichinous pork. To Kuhn, President of the Veterinary institute at Halle, several questions were submitted, viz:

1st. Are there characteristic signs by which the trichinosis hog may be detected? The results of feeding hogs on trichinæ were, that the appearances of trichinosis in swine were enteritis, colic, and slight paralytic symptoms of the posterior extremities; these symptoms are, however, by no means characteristic, and occur in other diseases to which the animal is subject. 2d. Kuhn has determined by observation, that swine of every age and race, from the common hog to the best improved stock, may become trichinous. 3d. It was shown that trichinosis did not interfere with the process of fattening. Trichinæ were found in an animal which had been sold for seventy dollars. 4th. By harpooning, the diagnosis of trichinosis may best be ascertained. Regarding the relative frequency of trichinæ in the various muscles, Kuhn has given a scale. They occur most frequently in the diaphragm, in the muscles of the loin, then in the muscles of the shoulder; less frequently in the tongue, the larynx, etc. It is remarkable that they never occur in the involuntary muscles, in the heart, or in adipose tissue.

*Preventive Measures.*—Regarding prophylaxis, the most careful cleanliness in raising stock cannot be too urgently recommended, although it can readily be seen how difficult this is with an animal which is as omnivorous as the hog. Feeding powdered anthracite has not been found to be of prophylactic value.

Dr. Roll discusses the measures of sanitary police which government should employ to protect the people against the trichinæ. As it is well known that the hog is the only animal from which trichinæ are imparted to man, there are three means to protect against the danger of the disease.

1st. To completely forbid the consumption of pork. 2d. To admit only such pork for consumption as is positively known to be free of trichinæ. 3d. To give to pork a preparation in cooking, by which the trichinæ which may be present are surely killed, and hence rendered inert.

Regarding the first means it may readily be seen that such a measure, for many reasons, is impracticable, as pork forms the most frequent animal food of the population. Regarding the second, a general microscopical inspection of the meat, under supervision of the government, as advocated by Virchow, is hardly practicable. Thus, for instance, in Vienna, where annually about 90,000 hogs are killed, it would demand an extraordinary force of examiners to carry the measure through; and the difficulty is yet increased, if we consider that of 20,000 hogs hardly one is found trichinous, even in countries where this disease occurs most frequently. An examiner, who for months in vain searches for an object, becomes tired out; and the correctness of such inspections could hardly be relied upon, aside from the fact that we do not yet possess abattoirs for hogs, and the inspectors would have to visit the houses of butchers, hotel-keepers, and private dwellings, to carry out the method. An imperative inspection of pork is hence considered impracticable.

But one method remains to ward off the danger of infection—by proper cooking, or preparation of the meat. It can be assumed with certainty, that a temperature of 60° R. kills the trichinæ. In cooking large pieces of pork for a short time, and in rapidly roasting chops, or cutlets, the interior of the meat generally does not reach more than 84° R. The great object, hence, in the preparation of pork, is thorough and complete cooking—rather too long than too little, and slowly rather than rapidly.

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*Trichinæ.*—The Medical Press and Circular states that in a case reported by Dr. Thudichum, (that of a German, 58 years of age,) he calculates the number of worms contained in the body of the patient, at about 40,000,000. A microscopic specimen of the flesh would frequently show upward of fifty of these capsules, and there were parts where the muscle seemed to consist of almost nothing but such capsules.



## EDITORIAL AND MISCELLANEOUS.

*Transactions of the Medical Association of Georgia.*

The annual meetings of the Medical Association of Georgia having been suspended by the war since April, 1861, assembled at the call of the President, Dr. J. T. Banks, of Griffin, at the City Hall, in Atlanta, on 21st June, 1866.

The President called the meeting to order, and the deliberations were commenced with prayer by Rev. Dr. Tucker, of Atlanta.

The Secretary being absent, on motion of Dr. F. O. Dannelly, Dr. R. C. Word was chosen Secretary, *pro tem*.

On motion of Dr. W. F. Westmoreland, Secretary was required to compile a list of all the members in attendance at the annual meetings of 1858 to 1861, inclusive—the books of the Association having been burned in the destruction of Atlanta—and report the same to this body at the afternoon session.

On motion of Dr. Logan, Dr. Jones, of Barbour county, Alabama, was invited to a seat in the Association.

On motion of Dr. Dannelly, the following preamble and resolution were adopted :

*Whereas*, The records of the Medical Association of Georgia were destroyed by the Federal forces during the occupation of the city of Atlanta, in 1864, and we have no entire roll of members,

*Resolved*, That each member of the Association now present report his name to the Secretary, so as to perfect the organization, and designate those who are rightfully entitled to participate in the deliberations of the body.

The following members reported and had their names recorded : Drs. J. T. Banks, J. F. Alexander, T. S. Powell, A. Means, W. C. Moore, E. J. Roach, J. M. Boring, W. F. Westmoreland, Eben Hillyer, F. O. Dannelly, J. C. Habersham, J. G. Westmoreland, J. P. Logan, R. C. Word, H. L. Wilson, Geo. G. Crawford, E. L. Connally, D. H. Connally and D. C. O'Keefe.

The Chair appointed as Committee on Credentials, Drs. Logan, Dannelly and J. G. Westmoreland.

On motion of Dr. W. F. Westmoreland, the regular order of business was suspended for the reception of new members; whereupon the following gentlemen were proposed, vouched for and elected members:

Drs. L. H. Orme, J. E. Godfrey, W. L. Armstrong, C. L. Redwine, H. L. Orme, D. W. Delbridge, B. M. Cromwell, J. C. Habersham and J. L. Moore.

On motion, Association adjourned till four p. m.

FOUR O'CLOCK, P. M.—The Association met pursuant to adjournment.

In accordance with resolution passed this morning, the Secretary *pro tem.* presented the required list of members recorded at the annual meetings alluded to.

Dr. Logan, Chairman of Committee on Credentials, made the following report, which was adopted:

The Committee on Credentials beg leave to report partially, that they have no information which would discredit any member of this Association, so far as their names have been recorded at this meeting. They would also solicit any information which may be in possession of members which would be appropriate to the object of their appointment.

Under a suspension of the regular order, the following applicants were elected members:

Drs. J. E. H. Ware, W. C. Askin, Charles Pinckney and W. A. Love.

On motion of Dr. J. G. Westmoreland, a committee of five were appointed to nominate suitable names to be balloted for to fill the various offices the ensuing year. Committee: Drs. J. G. Westmoreland, L. H. Orme, J. E. Godfrey, E. L. Connally and N. B. Drewry.

On report of nominating committee, the following elections were made:

Dr. A. Means, President; Dr. F. O. Dannelly, 1st Vice President; Dr. L. H. Orme, Recording Secretary; Dr. J. L. Moore, Corresponding Secretary.

On motion, meeting adjourned till nine o'clock to-morrow morning.

JUNE 22, NINE O'CLOCK, A. M.—Association called to order by the President.

Regular order suspended, and on motion of Dr. Dannelly, editors admitted to seats on the floor.

On motion, regular order suspended, and following new members admitted: Dr. S. H. Stout and Dr. R. Q. Stacey.

On motion, the election of Treasurer was had, and resulted in election of Dr. H. L. Wilson.

Drs. J. G. Westmoreland and Habersham committee to induct President elect to the chair.

The retiring President, Dr. Banks, addressed the Association, on leaving the chair, in a forcible and interesting manner.

Dr. Means, on taking the chair, entertained the Association for a few moments in his usually eloquent style.

On motion of Dr. Logan, the thanks of the Association were tendered the late President, Dr. Banks, for the efficient discharge of his duties as presiding officer.

Dr. Dannelly, Chairman of Committee to secure Orator for the session, reported that Dr. A. W. Griggs would deliver the annual address; for which six p. m. to-day, was set apart.

On motion of Dr. Dannelly,

*Resolved*, That Dr. J. G. Westmoreland be requested to assist the Recording Secretary in recording in suitable books the names of members, and transcribing into the same, the Constitution and By Laws of the Association. Also, in collecting the proceedings of the various meetings, and preserving in proper form all the available information pertaining to its history.

On motion of Dr. Dannelly,

*Resolved*, That an assessment of one dollar be imposed on each member of this Association, to defray current expenses for the ensuing year; and that the Corresponding Secretary be instructed to notify each member of this action of the body, and request that they forward the amount due under this resolution.

On motion, the Committee on Prize Essays reported, through the Chairman, Dr. Means, an Essay entitled to the prize of \$50 00, on diphtheria, with the motto "*Sis sub judice*."

On motion of Dr. Alexander, the sealed letter accompanying the essay, and containing the same motto, was then opened, and found to contain the name of Dr. E. L. Gaillard.

On motion *Resolved*, That a copy of the report of Committee on Prize Essays, with the prize this day awarded, be forwarded to Dr. Gaillard.

Dr. Habersham, of Savannah, reported the "Georgia Medical Society" of that city, in a flourishing condition.

Dr. W. F. Westmoreland reported favorably of the Atlanta Medical Society.

Dr. Griggs reported the objects and progress of the Georgia and Alabama Medical Association, at West Point, Georgia.

Dr. Crawford reported the requirements, progress, etc., of Fulton County Medical Society.

On motion, meeting adjourned till three p. m.

THREE P. M.—Meeting called to order by the President.

On motion, the regular order was suspended, and Dr. J. E. Blackshear was elected member of the Association.

Dr. Dannelly entertained the Association for a short time on the subject of artificial limbs.

On motion of Dr. Logan,

*Resolved*, That the thanks of this Association be tendered Dr. J. T. Banks, the late President of this body, for the deep interest manifested in its success, resulting in its reorganization, and for the highly efficient manner in which he has discharged the duties of its presiding officer.

Dr. Habersham moved that the portion of the Constitution authorizing the admission of State licentiates to membership in the Association, be stricken out. After some discussion, on motion of Dr. Godfrey, the further consideration of the subject was postponed to the next meeting of the Association.

Dr. J. G. Westmoreland moved the appointment of a committee to memorialise the Legislature on registration of births and deaths. Committee: Drs. Habersham, J. G. Westmoreland and Word.

The balloting for the next place of meeting for the Association, resulted in the selection of Griffin.

On motion of Dr. Banks,

*Resolved*, That the permanent location of the Associations at some suitable place, in the opinion of this meeting, is called for by its highest interests; and that in view of said interests, we do invite and call upon its members in every portion of the State, to meet with us at our next annual meeting, and settle definitely this question.

On motion of Dr. Dannelly,

*Resolved*, That a committee of three be appointed by the Chair to prepare an appropriate sketch of the life and character of those members of the Association who have died since our last meeting Committee: Drs. Dannelly, Banks and Logan.

On motion of Dr. O'Keefe, Drs. O'Keefe and W. F. Westmoreland were appointed a Committee on Essays.

On motion, Drs. Banks, J. G. Westmoreland, Dannelly, Drewry and O'Keefe were constituted a committee to examine prize essays.

On motion of Dr. O'Keefe, Dr. Banks was requested to furnish the Association with a copy of his address delivered on retiring from the chair.

On motion of Dr. J. G. Westmoreland,

*Resolved*, That the sum of one hundred dollars be hereby offered by the Association for the best prize essays—\$50 for the best; \$30 for the second, and \$20 for the third.

The President read a letter from Dr. J. M. Johnson, President Atlanta Medical Society, which the Secretary was requested to answer.

On motion, regular order of business was suspended for the admission of new members, when Dr. J. M. Johnson was elected member.

On motion of Dr. Logan, the letter of Dr. Johnson was ordered spread upon the minutes.

On motion of Dr. Habersham, Drs. Habersham and Powell were made a committee to publish, as soon as funds can be obtained, the prize essay of Dr. Gaillard.

Drs. Darnall, Drewry, Moore and Banks were appointed on the Committee of Arrangements, and required to select an orator to deliver the next annual address.

The hour appointed for the annual address of the present ses-

sion having arrived, the business of the Association was suspended for its delivery.

Dr. Griggs being conducted to the platform, entertained the Association for a short time with some pertinent and eloquent remarks touching subjects intimately connected with the interests of the medical profession.

On motion for adjournment, the President, Dr. Means, after making some touching allusions to our separation, and eloquent appeals in behalf of the honorable cause in which we are engaged, adjourned the Association to the next annual meeting in Griffin, on the second Wednesday in April, 1867.

L. H. ORME, Secretary.

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*General Resume of the Sick and Wounded of the Confederate States Army under Treatment during the years 1861 and 1862.*

From all the reports filed in the Surgeon-General's office for the years 1861 and 1862, exclusive of the few scattering ones which reached us from the Trans-Mississippi department, we are enabled to sum up the sickness and mortality occurring in the Southern armies during the late war as follows:

*Continued Fevers.*—Field reports, 36,746 cases and 5,205 deaths. Hospital reports, 40,565 cases and 7,020 deaths.

*Paroxysmal Fevers.*—Field reports, 115,415 cases and 848 deaths. Hospital reports, 49,311 cases and 485 deaths.

*Eruptive Fevers.*—Field, 44,438 cases and 1,036 deaths. Hospitals, 32,755 cases and 1,288 deaths.

*Diarrhœa and Dysentery.*—Field, 226,828 cases and 1,696 deaths. Hospitals, 86,506 cases and 1,658 deaths.

*Pulmonary Affections.*—Field, 42,204 cases, 3,535 deaths, and 4,538 discharges from service. Hospitals, 86,988 cases, 4,538 deaths, and 1,135 discharges.

*Rheumatism.*—Field, 29,834 cases, 1,142 discharges. Hospitals, 80,438 cases and 700 discharges.

*Gun-Shot Wounds.*—Field, 29,569 cases, 1,623 deaths and 493 discharges. Hospitals, 48,724 cases, 2,618 deaths, and 472 discharges. Killed in battle, 8,087.

*All other Diseases.*—Field, 324,321 cases and 2,278 deaths. Hospitals, 123,402 cases and 1,802 deaths.

Whole number of cases exhibited in the field reports during 1861 and 1862, was 848,555; of which 16,220 died, and 10,455 were discharged from service. There were admitted in hospitals for the same period 447,689 cases: of which 19,359 died, and 6,485 were discharged. Total deaths in two years, 35,579.

COMPOUND FRACTURE OF THE THIGH TREATED WITHOUT AMPUTATION.

	Recoveries	Deaths . . .	Days . . . .	Inches . . .
Average period of recovery . . . . .	116	105	000	000
Greatest period of recovery . . . . .	000	000	104	000
Least period of recovery . . . . .	000	000	41	000
Average period of death . . . . .	000	000	52	000
Greatest period of death . . . . .	000	000	185	000
Least period of death . . . . .	000	000	1	000
Average amount of shortening . . . . .	000	000	000	1.9
Greatest amount of shortening . . . . .	000	000	000	5.0
Least amount of shortening . . . . .	000	000	000	0.5

[*Richmond Medical Journal, from Confederate States Medical Journal.*

— A curious effect of the influence of civilization upon nature is seen in Pennsylvania. The Flora of the State is found to have undergone remarkable changes, plants that were formerly rare, being now quite abundant. This effect is attributed to the spread of railways, and the change is so marked that some botanists think the "foreign" Flora will supplant the native. The valley of the Susquehanna has already been taken possession of by the invaders.

*Ozone.*—M. Soret has determined that the density of ozone is one and a half times greater than that of oxygen. Dr. Boeckel, of Strasburg, has shown from observations conducted during a period of eleven years:

1. That there is more ozone in the spring of the year.
2. That May is the richest month.
3. That October and November are the poorest.
4. That there is less ozone at night than during the day.
5. That certain years were rich in ozone—1852, 1863.
6. That the barometric variations, morning and evening, coincided with the variations in the quantities of ozone.

*Medical Statistics.*—The Secretary of War, in compliance with a resolution of the Senate, calling for a compendium of the medical statistics collected during the war, states, on the authority of the Surgeon-General, that the records of many of the hospitals have not been received, and that the tabulation of those at hand is not complete; so that any compendium of the medical statistics of the war, at this time, must necessarily be based upon partial data, and hence be untrustworthy and valueless.

— A great many examinations of air are now making by scientific men. The very worst atmosphere yet found was in a court-room, the specimen showing that 5,000 parts of oxygen were absent in each 1,000,000 of air. To have 1,000 parts gone is bad, and 2,000 parts very bad. The only parallel to this court-room was found in the under galleries of coal mines.

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*Editors Atlanta Medical and Surgical Journal :*

The science of medicine, which has made rapid advances in the last half century, is receiving that attention from you and your coadjutors, that its importance demands.

There is no study upon which more constant thought, and laborious and scrutinizing observation ought to be earnestly bestowed. The life and health of the community, to a very considerable extent, are in the hands of the practitioner of medicine; he ought, therefore, to be a thoroughly educated man in this, decidedly the most important of the learned professions. To promote this is doubtless the grand object of your valuable Journal.

It is not my place or intention to write a treatise upon the science of medicine. There is a subject intimately connected with it, however, upon which a few reflections may be acceptable to your readers.

The eruption and management of children's teeth, as a general thing, does not receive that attention which its importance demands, and although we have many journals devoted to Dental



Science, publishing elaborate articles upon the management of the teeth, diffusing light upon this subject ; multitudes remain in ignorance in reference to the baneful influence that neglected teeth, especially in young children, may have upon the general health.

First and second dentition are subjects rarely considered by those who are most deeply interested in them, and yet there is nothing of greater importance, or that will contribute more to the health and well-being of children, present and future, than timely and judicious attention to the development and care of the teeth. A vast amount of suffering could be saved, and even life itself, if this branch of dental science was properly understood and appreciated.

From some cause, an idea very generally prevails that when the dentist has extracted an aching tooth, filled with gold those that are decayed, or has inserted artificial fixtures to supply the loss of the natural organs, that his work is at an end—his mission as a benefactor to the race complete. This is, however, a most pernicious and fatal mistake. We say pernicious, because it is untrue ; it is a libel upon the profession, and fatal because thousands of teeth are yearly sacrificed, on account of unpardonable oversight on the part of those whose duty it is to impart correct information upon this neglected topic. It is true there are men in the profession, whose aspirations lead them to nothing higher, and follow it simply for the *lucre* connected with it. To this there are many honorable exceptions.

Our Dental Colleges are turning out men of rare genius, who have had every opportunity for acquiring a thorough knowledge of the profession, and who devote their time and talents to the same, in all its branches, especially the management of children's teeth. This knowledge is not always confined to the graduates of a Dental College. There are many men in the profession who commenced practice before such an institution was ever established, as well as many who have never enjoyed the facilities of such an institution, who are, nevertheless, masters of their business.

With a little discrimination it will be an easy matter to find some man who understands this department of Dental Surgery—the management of children's teeth—and when found, no time

should be lost in having their teeth examined. If they are sound and in good condition, the examination will cost comparatively nothing; but should a temporary tooth be decayed or otherwise diseased, by all means have this damage repaired before it becomes painful. We fill many teeth for children from three years old and upward. Every medical man knows that an inflamed and aching tooth in the mouth of a child, often seriously disturbs the great life forces and produces the most serious consequences. Should the child be of firm and robust constitution, and the health not impaired from this cause, don't think for a moment that it will escape without serious trouble from another greater.

The child, at birth, has in its mouth the germs of fifty-two teeth. These are in a soft and pulpy state, and easily injured.

When the first or temporary teeth are fully developed there are ten in each jaw; these should be very tenderly cared for to prevent disease from being communicated to the soft and pulpy germs of the permanent ones just beneath them. Properly treated, these temporary teeth will remain in the mouth of the infant until the fangs are absorbed, and nature, by this beautiful operation, throws them out of the system, and the permanent teeth begin to make their appearance, which will usually be between the fifth and sixth year. At this period they will have through the gums four permanent grinders or molar teeth. Nothing is more common than for parents, as well as some physicians, to be greatly astonished when we tell them that these are their permanent teeth. These four molars are usually classed among the deciduous or first teeth; hence no effort is made to save them. We never fail to convince our patrons of their error when they bring their children to our office for examination. These molars frequently make their appearance before the child loses its two lower central incisors or front teeth, notwithstanding Dr. Dewees, in his work published in 1829, on diseases of children, says, "The permanent grinders do not usually appear until about the twelfth year." This is simply a mistake which dental research has corrected. About this time, between the fifth and sixth year, the lower central incisors drop out, and the permanent teeth come peering through the gums.

The lateral incisors make their appearance between the seventh and ninth; the first bicuspid between the ninth and tenth; the second between the tenth and eleventh; the cuspidati or eye teeth between the eleventh and twelfth; the second molars between the twelfth and fourteenth; the *dentis sapientiæ*, or wisdom teeth, between the eighteenth and twenty-second.

The temporary teeth ought to be frequently examined, and whenever decay makes its appearance, as we have already intimated, the decay should be arrested by filling or separating. Many reasons could be given for this decision which parents do not understand, but which we are always ready to explain. Suffice it to say that the durability, as well as the beauty of the permanent teeth very much depend upon the health of the first or temporary set. From the fifth to the fourteenth year of a child's life, if proper attention is given to the eruption and growth of the permanent teeth, the child may have in its mouth a beautiful and symmetrical arch, which, with care, may last through life; but if neglected, the beauty of the features, in all probability, will be seriously marred by projecting and irregular teeth, with the final loss of these important organs. Can we, then, too strongly impress upon the minds of those who have the care of children the importance of securing the services of some dentist who has been long enough engaged in the profession to give him experience in this department of science? We think not.

Go, then, with your children to the dentist of your choice, and if he understands his business you will receive instruction and services worth more to you and your children, by far, than all the cost and trouble connected with it. By this course you almost insure them good teeth in after life, a boon to them worth more than the gold of ophir.

H. MARSHALL, Dentist.

# ATLANTA Medical and Surgical Journal.

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## ORIGINAL COMMUNICATIONS.

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### ARTICLE I.

*Stone of Large Size in the Bladder.* By BENJAMIN FRANKLIN, M. D., of Philadelphia, Tennessee.

James Carter, a boy thirteen years old, rather delicate, and of scrofulous diathesis from infancy, I have attended in several severe attacks of chronic diarrhoea, from which disease he has suffered during life. I was called to him the 25th of July, 1865, and found him suffering from what I supposed to be acute nephritis, which gave way to the ordinary treatment for that disease, leaving symptoms of diseased bladder, for which I treated him several weeks with but little benefit. Finally, beginning to suspect stone in the bladder, I accordingly introduced a large size knitting-needle, curved as a sound (not having a regular sound,) and could plainly detect, as I thought, the presence of the stone. The most urgent symptom presenting itself, in this case, was the intolerable irritation of the glans penis, causing him to pull at the prepuce until the whole organ became very much swollen and inflamed. I am inclined to think, taking this case for an example, that writers on surgery do not give this symptom as much attention as is due it; for in this case the irritation was so great that he was constantly, both while sleeping or awake, pulling at the penis, as though the act gave him the only relief he could get.

I was called often to see my patient, only that I might palliate his case, for an operation was entirely disregarded by his parents, who often expressed themselves that they had rather the boy would die than to suffer the pains and risks of an operation, believing he would die on the table. After attending him for several months in this situation, and using all my persuasive efforts to have the boy operated on—seeing that the patient was fast reaching a point at which an operation would do him no good, evinced by great emaciation, loss of appetite, vomiting, red tongue, quick, irritable pulse, and all the attendant symptoms of a case in its extremity—as a choice between life and death, his family finally agreed to have the operation performed; and I accordingly addressed a note to Dr. W. F. Westmoreland, of Atlanta, Ga., and requested him to visit the boy with me and operate, if in his opinion there was still remaining a chance to save the boy's life by an operation.

Before Dr. Westmoreland's arrival, I called my friend, Dr. McDonough, to see the case with me, and we both decided upon a stone of extraordinary size, the outlines of which could be clearly traced by pressing firmly above the pubis, and also by introducing the index finger into the rectum. By an examination through the rectum, the size seemed to be near that of an ordinary goose egg.

Dr. Westmoreland saw the boy the 11th of last March, and upon introducing the sound, became satisfied of the presence of a large sized stone; considering the case as an extreme one, he determined, only from a sense of duty as a surgeon, to give the boy a chance for his life by performing an operation upon him, expressing himself at the time that the chance for a recovery was only a possibility.

The patient being placed under chloroform, the lateral operation was performed, using the Lithotome, which instrument, in my opinion, very greatly simplifies, as well as expedites this operation. In less than half a minute from the time the first incision was made with the ordinary scalpel, at the request of Dr. Westmoreland, I touched the stone with my finger through the opening, and the stone would have been on the table in that space of time, had not the unusual size prevented it from being extracted by the

simple use of the forceps. Enlarging the opening by expanding the blades of the forceps was repeatedly tried, without being sufficient to extract the stone, and finally the Lithotrite or Crusher was introduced, and an effort made to grasp it; but, to the astonishment of all, the Lithotrite would not grasp it by nearly an inch, after being drawn out to its greatest capacity. Here was an embarrassing point in the operation, and well calculated to unnerve the best of surgeons; but Dr. Westmoreland, with that self-possession which ever prompts a man who understands his business, conceived the idea of wearing away the stone by the use of the forceps, until the crusher would grasp it—by which he succeeded finally, after using time, patience and energy, in grasping the stone and crushing it to pieces, using the forceps on the fragments, and entirely removing from the bladder of this boy one of the largest stones, perhaps, for his age, on record.

The stone was estimated to be as large as a common size goose egg, filling the bladder to almost its utmost capacity. The boy, being put to bed, rested well by the use of a gentle opiate, and never had a bad symptom during the first twenty-five days after the operation; appetite became good; tongue cleaned off, and became moist; pulse soft, slow and regular; and, in short, his convalescence was uninterrupted and speedy, until the urine discharged naturally, which was on the twenty-fifth day, at which time he had a return of all the distressing symptoms of stone in the bladder, with all his former suffering attending the effort to urinate.

Being sent for, I concluded the difficulty consisted in inflammation of the urethra near the bulb, and accordingly addressed my treatment with but little relief. The idea occurred to me that a fragment may have been driven into the bulb of the urethra by the use of the syringe, and with this in view I recommended warm hip bath, while under active diuretics, and continued the bath until relaxations took place, and recommended the boy to make a strong effort to urinate, which he did, and succeeded in discharging a fragment of stone as large as a small pea, followed by instant relief and an immediate return of a speedy and uninterrupted convalescence.

Just here is a practical point connected with this case, that I think would be well to call the attention of the profession to, which is, the importance and necessity of always, after the crusher is used and bladder cleansed, passing a sound or catheter through the urethra, down to the seat of operation, so as to force out any fragment that might, as in this case, have become lodged in the urinary passage, and give great trouble to the physician, as well as greatly endangering the life of the patient.

Since the discharge of this fragment, the boy has had no further difficulty in any respect, and is now going to school, playing cheerfully with his schoolmates, and bids as fair to become a blessing to his parents as any member of the family.

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#### ARTICLE II.

*Supra-pubic Operation for Stone in the Bladder of a Girl seven years of age.* By W. F. WESTMORELAND, M. D., Professor of Surgery in the Atlanta Medical College.

In March, 1862, I was requested by Mr. G—— to visit his daughter, seven years of age, who, he said, had for several years suffered from stone in the bladder. Upon my arrival, I found my little patient poorly developed for her age—delicate and considerably emaciated from long continued suffering. From the history of the case, as given by the mother, I learned that she had suffered for three or four years from the ordinary symptoms of stone in the bladder; and that, for three or four years previous to my visit, her sufferings had been intense, and was evidently telling upon her constitution.

Upon examination with the sound, a stone of considerable size was readily detected. It was evident that the immediate removal of the calculus was the only means of relieving the sufferings and prolonging the life of the patient.

The propriety of an immediate operation decided upon, the

question presented itself as to the best method of removing the stone. The dilatation of the urethra, either with or without the longitudinal section of this canal, as recommended in the adult female by several surgeons for the removal of stone through this natural opening from the bladder, was rejected as impracticable in one so young; that if it was possible, it would almost certainly entail that terrible condition, permanent incontinence of urine. "Vaginal Lithotomy"—which in the adult may be performed with less risk, perhaps, to life than any other operation for stone in the bladder in the female—was regarded as impracticable in one so young and poorly developed as our little patient, requiring a length of time to dilate the vaginal canal—entailing an amount of suffering and irritation, which, in her condition, she was poorly able to bear; and at last, if successful in removing the stone by this procedure, a vesico-vaginal fistula being almost the invariable result, would require a second operation, which, in a subject only seven years old, would be attended with many difficulties.

Lithotripsy, the method, perhaps, the most frequently resorted to for the removal of stone from the female bladder, was regarded as difficult and hazardous. In addition to the tender age of the patient, from long continued irritation, the urethra and adjacent tissues were considerably indurated, and this canal consequently constricted. The bladder, too, was so excessively irritable that it was found impossible to have retained in this viscus the least quantity of water, so that if we could have succeeded in overcoming the first difficulty, and introduced the lithotrite into the bladder, we would have experienced, perhaps, a greater difficulty in attempting to grasp the stone in the flaccid condition of the organ, and more danger still by lacerating and contusing the mucous membrane with the instrument, if we had attempted to crush it.

In consultation with Drs. H. W. Brown and N. D'Alvigny, the *Supra-pubic* or *high* operation was determined upon. In a few days after my first visit, assisted by the above mentioned gentlemen, the following operation was performed:

An incision two inches and a half or three inches long was made through the skin and cellular tissue, commencing above and following the linea alba, and terminating at the symphysis; a



partial section of the abdominal parieties was next made. As it was impossible, from the irritable condition of the bladder, to distend it with fluids, and from the irritable and small size of the urethra, to introduce the sound of M. Come, an ordinary metallic bougie was now introduced and the contracted bladder forced above the symphysis pubis by the instrument. A careful dissection was now made until the bladder was reached; by means of two tenaculums inserted in the walls of the bladder, the fourth of an inch apart, the organ was fully under the control of the assistant who held the two hooks. The walls of the bladder were now punctured between the two tenaculums, and the incision made sufficiently large to introduce the forceps.

A stone an inch by three-quarters of an inch in diameter was, without difficulty, removed with the forceps.

A small silver catheter was now introduced into the urethra and confined in the bladder. For the first eight or ten days, there was considerable febrile excitement. I found great difficulty, after the first twenty-four hours, in retaining a catheter in the bladder—the presence of the instrument causing great uneasiness.

On the twelfth day after the operation, the battle of Shiloh was fought, and I was immediately ordered to Corinth, Mississippi. Upon my return to Atlanta in June following, I was gratified to find my little patient entirely recovered.

Dr. D'Alvigny, in whose care the patient was left, informed me that she had considerable fever, with diarrhoea, for several days after I left; in every other particular did well.

I last saw the patient two years after the operation, and she was then in the most perfect health.

## ARTICLE III.

*Proceedings of Atlanta Medical Society.*

ATLANTA, April 17, 1866.

Report of cases being in order—

DR. J. M. BORING reported a case of worms, succeeded by general anasarca, and finally resulting in chorea. He gave the following history of the case:

A boy 12 years old, of healthy appearance, was attacked about 12th of March, 1866, with symptoms attributed to the irritation of worms. Under the action of anthelmintic remedies, a large number of lumbricoides were discharged. In two weeks from this time, general and copious anasarca occurred, which, from the use of hydrogogue cathartics, disappeared in a few days, when symptoms of chorea made their appearance, and have, up to the present time, resisted all the means used for its relief. Blisters to the spine, quinine, iron, &c., have been used without any benefit. Seven years ago, when the boy was 5 years old, he had a similar attack, in every particular; from which he was entirely relieved in a few months, and from that time to the present attack, has enjoyed good health.

DR. J. G. WESTMORELAND thought all the symptoms detailed of the above case, resulted from the irritation of worms—that the impoverished state of the blood, consequent upon injury to the digestive functions by the intestinal irritation, led directly to the anasarca. The nervous disturbance in the form of chorea is in all probability from reflex nervous action, taking its origin in the same irritability of the bowels.

DR. O'KNEFE was of opinion that the dropsical condition was probably dependent upon irritability of the areola tissue; and while he could not satisfactorily account for this state of the tissue, or trace its connection with the intestinal irritation, to his entire satisfaction, yet he thought this a more rational explanation of the effusion, than to ascribe it to the quality of the blood itself. He considered it such a case as he preferred to call "inflammatory dropsy."

DR. W. F. WESTMORELAND believed the effusion, as well as symptoms of chorea, depended on reflex nervous action—that the capillary circulation, or the areola tissue, was probably so changed by the nervous disturbance, that the escape of serum into the areola tissue was the result. He could not very well explain the particular nature of the change produced, but thought the fact not unreasonable, since it is known that the circulation and functions of other organs, are dependent upon proper nervous influence, and that the particular character of functional derangement is influenced by the particular form of nervous disturbance.

DR. O'KEEFE reported a case of delivery—a primipara—in which a considerable amount of chloroform was inhaled during the labor, with the probable effect of suspending lactation. In this case not enough milk was secreted to sustain the child, without nourishment from other sources. He mentioned this case for the purpose of aiding in the investigation instituted by Dr. Alexander some weeks since. He thought it important to settle the question, whether or not the use of chloroform in labor prevents the ordinary secretion of milk. His attention had never, till recently, been called to the subject, and the case mentioned had afforded the only opportunity of giving evidence on that point.

DR. BORING could call to mind two cases of labor in which a mixture of chloroform and chloric ether—one part of the former to two of the latter—was given in considerable quantities without any disturbance to the process of lactation. In both instances the secretion was abundant, and in one—a premature delivery with still-born child—much trouble was caused by the amount of milk. He could remember the result, in this particular, of no case in which pure chloroform had been inhaled.

DR. J. G. WESTMORELAND mentioned a case of difficult labor, in which a considerable quantity of chloroform was used, and followed by deficient lactation. So inconsiderable was the secretion, that, though the child did not survive and no other means of extracting the milk afforded, there was not enough milk secreted to give any uneasiness or trouble in any way.

DR. REDWINE had never had his attention called to this subject, but in the frequent use of chloroform in obstetrical practice, he

could not remember a case from which he could give evidence in the settlement of this question.

DR. J. G. WESTMORELAND reported the discovery of what he supposed to be genuine original vaccinia. He was consulted this morning, by a young man—a milk-man, for a dairy in the neighborhood of Atlanta—on account of an eruption on his hands. Upon examination, the resemblance to vaccine pustule was so striking, that inquiries were made as to whether any disease had been discovered among the cows he had been milking, and whether or not he had been previously vaccinated. The report of “little warts on the cow’s tits” was made, and on examination a very imperfect cicatrix of vaccination was found upon his arm. In presence of two other medical men, the cows, from which this eruption was evidently contracted, were examined, and some six or eight, of the twenty cows examined, were evidently the subjects of what seemed to be original vaccinia\*.

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ATLANTA, May 1, 1866.

Society called to order by the President, Dr. Jno. M. Johnson.

At the call for reports of cases—

DR. J. G. WESTMORELAND reported a case of chronic diarrhoea—treated with creasote. A young man, aged about 22 years, had suffered for six months with chronic diarrhoea, contracted at Apalachicola, Florida. He had undergone the usual dietic management, with astringent, alterative, opiate and tonic medication, without any permanent benefit. Under the use of three or four drops of creasote suspended in half an ounce of acacia mucilage, the discharges are measurably controlled, and his strength is improving.

He mentioned this case more with the view of calling attention to the action of creasote in bowels affections, than to anything of interest connected with the disease itself. It had been the practice of some surgeons in the Confederate army, to use this remedy

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\* The lymph and scabs from the cows have since been introduced into the arms of non-vaccinated subjects without any effect.

in very large doses, for the cure of obstinate, acute diarrhoea and dysentery. This practice, not being general, and not having heard nor read anything of this treatment in civil practice, it is desirable that the experience of members should be given.

DR. W. F. WESTMORELAND stated that at Aberdeen, Mississippi, in 1862, by the urgent request of an Assistant Surgeon, in his hospital, he consented to the administration of *heroic* doses of creasote, in a case of malignant dysentery, in which excessively painful discharges occurred at intervals of only fifteen minutes. The patient was apprised of his danger, and of the seemingly hazardous experiment that was concluded upon. His consent being obtained, a teaspoonful of creasote in a tablespoonful of water was administered. In four hours the pain was much less and the evacuations reduced to half hour intervals, when the same quantity was repeated. This portion lessened the frequency of the discharges to one every two hours, and relieved almost entirely the excessive pain accompanying them. The patient was considerably exhilarated, exhibiting symptoms of ordinary intoxication. The quantity was reduced to thirty drops, and kept up at proper intervals to keep the bowels restrained, until convalescence was perfectly established.

He had adopted the same plan with several cases in the hospital under his charge in Atlanta, with similar results in some, while in others no benefit was derived. In a few instances the symptoms were perhaps aggravated.

DR. CONNALLY had used, in one case, drachm doses of the creasote, with success, in obstinate diarrhoea.

DR. GRIFFIN gave forty to fifty drops, with very satisfactory results, in acute dysentery, and in the diarrhoea of typhoid fever.

DR. O'KEEFE mentioned a case of *mania a portu*, which he had treated successfully with heroic doses of tincture digitalis. He made the following report :

A patient, in hospital at Richmond, became raving with mania, from drink ; so much so that the constant presence of an attendant was required to hold him in bed. Half fluid ounce of tincture digitalis was administered, and repeated in two hours, with the

effect of quieting him, and in a few hours induced comfortable sleep and entire relief from the mania. The circulation was not materially affected.

DR. WORD had come to the conclusion that the profession have been greatly deceived in regard to the effects of remedies. Doses of certain agents that were once thought to be poisonous are now given with impunity. He mentioned a case in which tincture veratrum was given, by mistake, for laudanum, in the dose of twenty drops; repeated every half hour till three drachms had been taken, with no more serious effect than frequent vomiting. It was given in his absence during the night, and on making his visit the following morning, he found the patient comfortable, and very much relieved from the disease (pneumonia) under treatment.

DR. W. F. WESTMORELAND had witnessed a much greater degree of tolerance in the action of veratrum. A young man of Atlanta, several years since, had taken, through mistake for paregoric, from a half to fluid ounce of tincture veratrum. Constant retching and vomiting ensued, but subsided under the action of a few ounces of brandy and half grain morphia, without any further difficulty.

The regular subject for discussion—*Placenta Prævia*—being announced in order—

DR. O'KEEFE moved its indefinite postponement, which was lost.

DR. WORD, from some experience in the management of obstetrical cases, with this anomalous position of the placenta, was impressed with the importance of the subject, and detailed the difficulties of delivering by the feet, through a rupture of the placenta, and of suffering the delivery to be effected by the unassisted efforts of nature. He had found a difficulty in passing the head through a rent made in the placenta, after the lower extremities and body had been forced through; and also believed that when the labor is suffered to progress naturally, there is a constant tendency for the head to be diverted, by the placenta in front of it, from the proper direction, thereby making a shoulder presentation.

DR. J. G. WESTMORELAND thought, without having had much

experience in the management of such cases, that the plan which would afford the best prospect for the safety of the child, without increasing the risk to the mother, should be adopted. Probably by separating a portion of the placenta, the hand may be passed up, pressing against the bleeding surface of the womb, and the delivery effected rapidly by turning, with equal safety to the mother, and a probable chance for the child.

DR. JOHNSON had seen unassisted delivery effected safely to the mother; and considered that a proper understanding of the nature of the difficulty, and the theory of labor, with sound judgment, would dictate the course to be pursued in a particular case.

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ATLANTA, May 8, 1866.

Society called to order by the President, Dr. John M. Johnson.

No reports of cases made.

Discussion of the regular subject being in order, the President called on Dr. O'Keefe, one of the committee who selected it, to open the discussion on typhoid fever, the subject selected at last meeting to be discussed at this.

DR. O'KEEFE said: While it was very generally understood and acknowledged that a certain course of treatment now adopted by all, is the only safe plan of treating the disease, differences of opinion in regard to its pathology exist. The French contend that disease of the alamantry glands is essential to the existence of the fever. So certain are they of this, that when antopsy discovers no such lesion, notwithstanding the diagnosis may have been made with great confidence, it is set down as an error in diagnosis. Others, in this country, believe the primary disturbance exists in the nervous centres. He did not subscribe to either of these theories. He considered it the result of a blood poison; that the various incidental forms of disturbance—by no means uniform—are the results of this state of the blood, which, passing to all the organs, is likely to affect all.

DR. J. G. WESTMORELAND was glad to find even a compromise between the views he entertained of its pathology and that of the

follicular origin. And under the circumstances he was inclined to say very little upon the subject. While he could not subscribe to the doctrine just rehearsed, it was one step in the right direction, and, therefore, made no argument against it.

DR. O'KEEFE replied, asking a statement of Dr. Westmoreland's views on this question—said he had given his opinion, and if anything could be said to controvert it, he would be pleased to hear it. He thought the various forms of disturbance found in the disease most likely arises from poisoned blood, because the blood passes all parts.

DR. J. G. WESTMORELAND was desirous to know what was meant by blood poison. If by it is meant a derangement of the quality of the blood, so that it does not answer the purposes of renewing the tissues and sustaining the strength and vigor of the body, and thus lead to death from this cause, he could understand that such might be the case, but that under such circumstances as surrounded typhoid fever, no such opinion could be entertained. The mere fact of the many forms of organic and functional disturbance found during the progress of the fever, does not prove that the blood must necessarily lead to them. The blood is often a vehicle by which poisons are carried to the organ of their selection, but is not necessarily changed in its properties. All poisons affect some particular organ or tissue. And while we recognize the cause of typhoid as well as remittent fever, a poison, we think that a certain part is selected by it, and is invariably poisoned or impressed by it in such manner as to derange its functions, and through it the functions of other organs dependent upon it. From the mutual dependence of their functions, it does not require a stretch of imagination to conceive that the disturbance of the functions of the nervous centres may lead to every kind of functional disturbance met with in adynamic fevers.

DR. J. M. JOHNSON thought both the gentlemen preceding him were right, and both were wrong. Right in thinking that the blood and nervous centres were both the subjects of poisonous influence, and wrong in supposing (as each did for his own theory) that the seat of primary disturbance is invariably the same. He thought each of these causes, under favorable circumstances, produced the same result.



## SELECTIONS.

*Anemia.—Fibrin coagulates only under the influence of coagulating substance, termed globulin.* By DAVID WOOSTER, M. D.

A. Schmidt proved by researches and analysis of remarkable exactness, that fibrin does not exist in the blood. It can there be found merely in the condition of a fibrinogenous liquid matter, as Virchow had already suggested. This substance is formed in the parenchymas; it is modified in the lymphatic vessels, then enters the blood where it undergoes a new transformation under the influence of oxygen.

Furthermore, the globules of the blood contain a substance which, certain undetermined circumstances, and always after death, acts as a coagulating principle. It is not as foreign bodies that globules produce coagulation, but by virtue of a substance in their constitution.

This substance is not a gaseous fluid, for oxygen merely hastens coagulation, but is not the cause of it; carbonic acid gas, far from favoring solidification of the clot, diminishes the tendency to coagulation. The coagulating principle not being any gas pertaining to the blood, can only be a liquid material, and this is positively demonstrated by experiment. The preferred location of this coagulating material is in the red globules, and particularly in the-hemato-crystalin; if a little defibrinated blood containing red globules be added to a given quantity of chyle, which we know coagulates slowly and with difficulty, on the instant coagulation will take place. Globules then are true exciters of coagulation. This power of inducing coagulation also exists in the cells of the connective tissue, which are in the vascular walls, but in an infinitely less degree; it is also found in the lymph which contains only white globules.

Now, the coagulative power not being peculiar to the red globules, it must pertain to a principle common to all the histologic elements; this substance, according to A. Schmidt, is globulin. *The plastic power of a liquid may be ascertained by the amount of globulin it contains.* In the blood globule, it is an integral part of the globule itself, and this fact explains the superior coagulating energy manifested by these globules.

To obtain this plastic (coagulating) substance, a current of carbonic acid is passed through a very dilute solution of crystals of

blood, an amorphous white deposit is thus formed, which, after having been dissolved in a weak alkaline solution, exhibits coagulating properties in the highest degree.

This substance exhibits the same reaction as the globulin of Berzelius, and particularly that which is extracted from crystallin.

Globulin is found with the same properties in all tissues formed by cells; but in the normal condition of life, it (the globulin) could not exercise its peculiar power without coagulating the blood in the whole vascular system; there must be a power in the walls of the vessels themselves of transforming the globulin into coagulable matter, under the influence of the ozone of the blood. Thus, in fact, the slower the blood is drawn from a vein the more slowly it coagulates subsequently. Why? Because contact of the blood with the walls of the living vessel prevents it from coagulation. But, as soon as the irritability of a vessel is lost, it loses property of decomposing globulin, then coagulation takes place easily, by the intervention of hematin, which preserves for a much longer time its coagulating power, to which now nothing is opposed; hence coagulation after death.

Thus, in the living organism, fluidity of the blood is maintained by the vascular walls; but vitality does not act alone; it is hastened by a simple physical action, that is, by the decomposition of the globulin or its transformation into fibrinogen.

Besides, the vital action, that it may be efficient, demands a purely physical condition, which is regularity of the current of the blood; if an obstacle interferes with the circulation, or if an inequality in the walls occurs, by any lesion whatsoever, the wall can no longer be considered as living, that is, in normal life, at that point; at that point it ceases to destroy the globulin, and the blood remains free to exclusive physical action; it coagulates at the diseased point; it stops at the roughened point, and this first coagulum once formed, becomes the focus of successive stratifications.

Schmidt, who described these properties of globulin, stopped at the chemical limit of his investigation, without taking into account the physiological applications here suggested.—*Pacific Medical and Surgical Journal*.

*Rectified Oil of Amber as a Remedy for Hæmorrhoids.*

The editor of the *American Journal of Pharmacy*, Mr. William Proctor, Jr., contributes the following interesting communication to the journal of which he is editor :

"Of the large number of persons who suffer from this annoying complaint, very many never consult a physician, and many others after renewed treatment give up the idea of becoming cured, viewing the affliction as some do old ulcers, as a burden to be borne while life continues. Various external applications are constantly prescribed, as an ointment of acetate of lead, tannin or nutgall, and opium, which is often successful in affording relief. Numerous secret nostrums have, from time to time, attracted attention, indicating the prevalence of the disease. Several years ago my curiosity was excited by the repeated calls for rectified oil of amber by a person who was not in any way connected with medicine, and he was asked the use to which it was applied. He said it was for piles, and that he rarely knew it to fail; the numerous calls that had been made being for friends and acquaintances who were sufferers from the complaint. After that, on several occasions where opportunity offered, it was suggested and tried with success, in many cases of piles where the tumors were external and annoying. The manner of its curative action I am not aware of. The oil is applied as a lotion to the tumors, and around the anus where the swellings exist. It occasions a smarting sensation at first, but after several applications the sensitiveness disappears, and the tumors are dissipated. So far as is known to the writer, the influence is entirely local, and does not extend beyond the parts to which it is applied. I am not aware that it has been applied beyond the sphincter ani to the internal tumors, but know of a case wherein both internal and external piles existed, the latter disappearing, and the others continuing to give annoyance. The object of this note is to ask the attention of medical men to the subject, that the actual value of the oil of amber as a remedy for piles may be satisfactorily tested. It may be that in some cases admixture with lard or cerate would be preferable, and in the form of an emulsion, or associated with glycerin or olive oil, it might be applied in the rectum by injection or by a bougie. These are mere suggestions to the physician.

"It is to be regretted that so little genuine oil of amber is to be obtained, as has been conclusively shown by Mr. Ebert, of Chicago (see page 146 of this volume), who finds that it costs as much per ounce to make the oil as it sells for in commerce per pound. Failures may be attributed to the spurious oil made from turpentine and coal oil, shaken with oil of tar and oil of amber."

*Case of Vesico-Vaginal Fistula and Spontaneous Cure.* By  
LORENZO HUBBARD, M. D., Marysville, California.

Mrs. F.—, of Yuba county, suffered instrumental labor, Nov. 3, 1865. From the commencement to the termination of labor was some five or six hours. Presentation natural—vertex to the left acetabulum. The membranes ruptured early, and the head soon passed the superior strait and became impacted in the pelvis. After many ineffectual attempts to bring the head forward, the forceps were applied and the child delivered without any extraordinary effort. No untoward symptoms followed.

At the end of three days the patient was able to sit up to have her bed changed, and at the end of two weeks was sufficiently recovered to sit up most of the day, and to walk about the house. At this time, and after taking a dose of senna, she was attacked with what she supposed were griping pains, from the medicine; but the pains were so severe and continued so long that she finally sent for me to visit her. I found her suffering as above; pains bearing down and occurring at irregular and distant intervals. The bowels had been moved moderately by the medicine, and I very naturally supposed the womb was acting through sympathy. I accordingly prescribed anodyne, and promised to see her the next day.

In the morning I was informed that after a paroxysm of severe bearing down pain, some time in the night, there had been an involuntary discharge of water, and from that time she had no control over the urinary organs; and, moreover, she had discharged a yellowish concretion resembling very much tartar which frequently collects on teeth.

An examination being necessary, I passed two fingers up the vagina, and soon met with what I supposed to be a rent through its walls. After a more thorough manipulation I was satisfied that the fingers passed into the bladder; the calculus concretions appearing abundant and quite firmly adherent to that viscus.

I then inserted a glass speculum, and was astonished and alarmed to discover the entire destruction of a portion of the urethra and an open lesion extending above the neck of the bladder. The urine trickled down through the opening and instrument continually, while portions of the whitish incrustations which seemed to cover the entire cavity, passed away. I made an unsuccessful attempt to scoop out the calculi from the bladder; the adhesions, however, were so firm that it was deemed prudent to adopt a milder method. With this view injections of warm water, acidulated with sulphuric acid, were used, and succeeded perfectly in the course of a couple of days.

When a sound was passed into the bladder through the urethra, a space of about two inches on the sound could be seen by means of the speculum in the vagina.

After the concretions had been discharged the parts appeared fresh and healthy. No pain and very little soreness were experienced. Immediately, healthy granulations began to sprout from the superior portion of the cavity extending downwards, and soon very nearly covered the abraded parts, hiding from view the fistula, which at first easily admitted the passage of two fingers.

The cause of the difficulty is enveloped in some doubt. Where the parts bruised in delivery, and was the destruction the result of ulceration? In this case, would there not have been pain, inflammation, and at least some irritative fever? Or may it not have been the result of absorption, occasioned by the pressure of calculous matter, and possibly somewhat assisted by the counter pressure of the child's head? It is evident that no lesion took place at the time of delivery, as no inconvenience was experienced until two weeks had elapsed.

The parts having been thoroughly cleansed, as was before stated, a solution of sulphate of zinc was ordered to be used as an injection, morning and evening, and occasionally, when dark patches appeared, the nitrate of silver in substance was applied, in the hope of favoring healthy granulations.

During the first month the urine dripped away continually, as it was secreted by the kidneys. At the end of the second month, there appeared a slight disposition of the bladder to retain its contents, and the patient was delighted to experience for the first time, since the accident, something like a desire to urinate.

After the expiration of three months, there was very little dripping when the patient was in a recumbent or sitting posture, or when she was standing or walking, except when the bladder was partially filled. On the first of March examination proved that a portion, at least, of the urine escaped through the meatus urinarius without the assistance of the catheter.

At the present time, April 10th, the patient is able to walk or stand for a considerable time without much inconvenience; if on her feet most of the day she would perhaps wet two napkins. There is no involuntary escape of urine when sitting or lying. The desire to urinate is natural, and the bladder possesses its normal expulsive powers. The fistula cannot, as formerly, be discovered through the speculum, nor can we feel the metallic sound; nevertheless there is still an escape of urine into the vagina.

From the neck of the bladder, at the superior extremity of the injury, a heavy mass of granulations, as before mentioned, sprout-

ed, extending in the course of the urethra, completely covering the "fistula." This mass is perhaps two and a half inches in length and one and a half in breadth, resembling the section of an egg with the small end downwards. Underneath this point, until the last examination, I have been able to pass an instrument into the bladder; but at the last attempt the patient complained so much that I desisted, under the pleasing prospect that the fistula had nearly closed. The catheter is easily passed through the urethra into the bladder, although the orifice at the neck appears somewhat contracted, the patient complaining of a disagreeable distention when the instrument is inserted.

The sequel of this case is only accumulative evidence that nature, left to herself, or led by a kindly hand, is capable of astonishing reparative efforts; and teaches the instructive lesson, that, however far removed from probable human aid the accident may appear, the unfortunate sufferer may still trust with reasonable confidence to her powers.

This case has been a novelty, it being the first I had ever witnessed. "Mr. Barnes, of Exeter, England," some years ago reported two cases. (See Dr. Gooch's *Compendium of Midwifery*, page 55.) These were supposed to have been produced by the continuous pressure of the child's head during a protracted labor. Dr. Gooch was consulted, and recommended the "introduction into the vagina of an India rubber bottle with a piece of sponge sewed to it;" the sponge was placed opposite the fistulous opening in the bladder, which absorbed the urine and conducted it into the bottle. A catheter was passed two or three times a day. Here the urethra was perfect. In the case we have reported, the urethra was severed. At the end of two months, in Mr. Barnes' cases, the "fistulous communication was much smaller." "And in a few months the opening was entirely closed."

To relieve this dripping of urine, I used for a time, a sponge and bladder; but this soon proved inconvenient, and the patient dropped its use altogether, preferring napkins properly adjusted; and, moreover, I became convinced that the plugging was a disadvantage.

First. It distends the parts and necessarily creates much irritation, and prevents the natural and rapid contraction, so essential in the cure.

Second. It invites morbid secretions, and the parts cannot be kept in so perfect a state of cleanliness and quietude as when only injections are relied upon.

While we trust mostly to the efforts of nature for the cure, if one is effected, the surgeon should be vigilant in seeing that the

parts are kept scrupulously clean; that ulcerations, if they occur, are promptly checked, and that the bladder be kept as free from the accumulation of urine as possible by means of the catheter.

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*Successful Removal of both Ovaries.* By A. REEVES JACKSON, M. D., Stroudsburg, Pa.

Sarah T., aged forty-seven years, unmarried, applied for relief, November 25, 1862. She commenced menstruating at the age of seventeen, and the function has always regularly and painlessly performed. Six or seven years ago, after having taken a severe cold, she felt a sensation which she compared to the occasional slow dropping of water in the region of the bladder. Shortly after this she discovered that the lower portion of her abdomen was enlarged, and that the increase was greatest on the left side. She also felt, indistinctly, a tumor about the size of a small orange in the same locality. In a single night the whole of this enlargement, including the tumor, spontaneously disappeared. However, it soon returned, and she has since been increasing gradually in size. Her complexion is dull and sallow, appetite good, bowels regular, although latterly she has experienced some difficulty in defecation, and also in urinating. The abdomen measures forty-one inches in circumference; is very greatly and equably distended, and distinctly fluctuating, the fluid evidently encysted. No solid tumor is discoverable through the abdominal walls. The left leg and foot are cedematous.

A vaginal examination reveals a hard, smooth, elastic tumor, immovable or nearly so, completely filling the cavity of the pelvis. The os uteri circular, and with soft lips, is distinguished with difficulty. An attempt to introduce the sound is unsuccessful, the instrument appearing to meet with some obstruction immediately after entering the os.

Various remedial means were used without relief, and the oppression of the breathing, the swelling of the lower extremities, and other symptoms dependent upon the distension of the abdomen having become insupportable, tapping was decided upon, and performed January 1, 1863, with great and immediate relief to the patient. The fluid removed was glairy, of a pale straw color,

somewhat tenacious, and measured forty-three pints. After its withdrawal the outlines of a solid tumor, occupying the lower portion of the abdomen and extending as high up as the umbilicus, were clearly distinguished, the greatest bulk being apparently on the left side. It was slightly movable, smooth, imperfectly globular, and without evident fluctuation.

The patient remained comfortable several weeks, but the abdomen again became distended, and tapping was repeated December 24, 1863. She was subsequently tapped several times, the intervals between the operations became each time shorter, and the last operation being done July 27, 1865.

The patient's general health now began rapidly to fail, and after having the dangers of the operation fully explained to her, she concluded to submit to ovariectomy.

The operation was performed October 31, 1865, in the presence and with the assistance of Drs. Bond, Bush, Barnes, Welling, Davis, Williams, Walton, and Mr. Van Buskirk, medical student. The patient having been well purged in the morning by an ounce of castor oil, was placed upon a narrow table, the nates brought near to the lower end, and her feet resting upon a chair without a back. Everything being in readiness, she was put under the influence of an anæsthetic mixture composed of one part of chloroform and two parts of sulphuric ether by measure. An incision four inches in length was made in the linea alba, commencing one inch below the umbilicus, and extending directly downward. This was gradually and cautiously deepened with the view of exposing and tapping the cyst and removing its fluid contents through the canula. The design was frustrated, however, by the knife suddenly entering the cyst and giving exit to sixteen pints of a gelatinous, whitish fluid. In order to facilitate the evacuations of the latter and to guard against its entrance into the peritoneal cavity, the patient was turned completely on her right side. The cyst having been emptied, it was ascertained that its walls were adherent to the peritoneum at the place of incision, and it was with very great difficulty that the adhesions could be sufficiently broken down to enable the hand to be introduced in order to learn the further condition of the parts involved. When this was finally accomplished it was found that there were two tumors entirely distinct, the one arising from the right, and the other from the left side. The one on the right side was a unilocular cyst with thickened walls, firmly adherent to the mesentery, omentum, intestines, and to the abdominal surface of the peritoneum. It was now empty and collapsed, and was maintained in its position by means of these numerous attachments.



The other, arising from the left side, was hard, firmly adherent to the peritoneal surfaces of the left abdominal and pelvic walls, and to the posterior and left sides of the fundus of the womb. The incision in the abdominal walls having been made sufficiently large, the attachments of the tumor were carefully separated by means of the fingers aided occasionally with the handle of the scalpel. The tumor was then lifted through the opening, and a clamp having been placed firmly upon the pedicle, the tumor was separated and removed. The pedicle, which consisted of the broad ligament of the uterus, was not more than one inch in length, about the thickness of a finger, and somewhat flattened. The empty cyst of the other tumor was next cautiously separated from its many attachments and drawn away. Its pedicle, which also consisted of the broad ligament, was about four inches wide, two and a half inches long, and traversed by large vessels. A clamp was placed upon it, and it was then cut close to its attachment to the tumor. The cavity of the abdomen was next carefully cleansed by means of newly prepared sponges and warm water, and the upper portion of the wound drawn together and retained by means of hare-lip pins and sutures, care being taken to bring the peritoneal surfaces accurately in contact. The clamps being found to interfere very greatly with the approximation of the edges of the lower portion of the wound, owing to the shortness of the pedicles, it was decided to remove them, and this was accordingly done, after previously securing the pedicles by strong ligatures applied beneath the clamps.

The remainder of the wound was then closed by iron-wire sutures and hare-lip pins. The pedicles, being drawn out by their ligatures, were transixed by large hare-lip pins passed also through the edges of the wound, and thus kept on the surface of the abdomen. The stumps beyond the ligatures were freely touched with a solution of persulphate of iron. Strips of adhesive plaster were then placed across the abdomen, and a folded piece of muslin dipped in warm water laid over the part. A flannel bandage pinned around the body and kept in position by means of perineal straps completed the dressing. The patient was now removed from the table and placed in bed. Two teaspoonsful of elixir of opium were given her, and as she appeared somewhat prostrated, some brandy and water were also administered.

Ten o'clock P. M., complains of great thirst and some pain in the abdomen. Pulse 100, full, tense. Empty the bladder with the catheter, and give two teaspoonsful of McMunn's elixir of opium. Enjoin strict rest, and allow ice held in the mouth to quench thirst.

September 1st, 9 A. M. Has slept some during the night; pulse 112; tongue slightly furred; complains of thirst, and slight pain in the abdomen; introduce catheter; allow ice and toast-water. 10 P. M. Still has slight pain; empty bladder.

2d, 6 A. M. Expresses herself as feeling very well. Thinks she is able to get out of bed. Pulse 112; empty bladder. Allow ice and toast-water, with a small quantity of cream added to the latter. 12 M. Has been sleeping, feels quite comfortable; pulse 98. Give two teaspoonsful elixir opium. 3 P. M. Has been sleeping; pulse 108; empty bladder. 12 midnight. Comfortable; emptied bladder.

3d, 10 A. M. Slept some during the night; pulse 90; comfortable, and has less thirst. Examine the wound for the first time. It looks well, and the union of the edges appears to be perfect, except at the point where the stumps of the pedicles protrude; the latter appear shrunken and blackened. Apply fresh compresses wrung out of warm water; order weak chicken-water as diet, and ice to allay thirst; empty the bladder. 5 P. M. Pulse 100; has been sleeping, and feels well; tongue slightly coated with a whitish fur, a condition which has been present from the first; has taken the chicken-water several times with enjoyment. 12 midnight. Comfortable. Dress the wound, and give two teaspoonsful elixir opium.

4th, 9 A. M. Pulse 104. Make an entire change of clothing without raising the patient from the bed. The stumps of the pedicles not being removed, apply a flaxseed-meal poultice over that portion of the wound. Order chicken-water with rice, empty bladder, and give full dose of opium. 5 P. M. Comfortable; introduce catheter. 12 midnight. Empty bladder, and give full dose morph. sulph.

5th, 8 A. M. Complains of pain and tenderness in both iliac regions; pulse 100; says the morphia acted unpleasantly, and did not produce sleep. Empty bladder; ordered flannels wrung out of hot water to be kept constantly applied to the abdomen. 1 P. M. Pulse 108; has less pain; appetite good, and takes the broth with great relish. Wound looks well; no swelling of the abdomen. 12 midnight. Comfortable. Empty bladder; give full dose of opium.

6th, 10 A. M. Did not sleep well last night, but feels cheerful this morning. Dress lower portion of the wound, and apply lard to the sutures and pins to their points of ingress and egress; empty bladder; order the quantity of nourishment to be increased. 5 P. M. Has been sleeping soundly, and feels very comfortable; pulse 92; appetite good; no tenderness of the abdomen on slight

pressure. Introduce catheter. 12 midnight. Dress lower end of wound; some of the ligatures on the pedicles are loose; empty bladder; omit the opium.

7th, 9 A. M. Pulse 84; has slept well. Dress lower end of wound; introduce catheter; order 1 oz. castor oil, and permit the head and shoulders to be somewhat raised. 4 P. M. The castor oil has produced three copious evacuations without pain. Dress the lower portion of the wound, and remove two of the sutures; introduce catheter. Patient able to move in any direction without pain. Change her clothes and the bedding; afterwards administer a small quantity of brandy. 12 midnight. Not quite so well; the bowels have been moved three more times, occasioning weakness; pulse 88. Empty bladder; dress the wound; give full dose of opium.

8th, 9 A. M. Pulse 100; bowels quite loose, and patient feels weak. Dress lower end of wound, and remove one hare-lip pin; give a cup of strong black tea; introduce catheter. 1 P. M. Bowels have acted four times since last visit. Fearful that such excessive peristaltic action may induce peritonitis; introduce a suppository of morphia into rectum. 4½ P. M. Has been sleeping; pulse 88; bowels quiet since last visit. Empty bladder; order a bowl of strong broth with rice. 12 midnight. Pulse 100; bowels open twice during the evening. Introduce morphia suppository; empty bladder.

9th, 9 A. M. Feels better this morning; pulse 96; bowels not moved since last visit; has had some nausea and vomiting; has taken some coffee and cracker this morning with relish. Dress lower end of wound, and empty bladder. 5 P. M. Pulse 92; bowels moved once. Remove one of the pins that had been passed through the pedicles; introduce catheter. 12 midnight. Pulse 88; feels somewhat uncomfortable from having eaten too freely. Empty bladder; remove two of the wire sutures, and the pin transfixing the other pedicle.

10th, 9 A. M. Feels unusually well; got out of bed this morning and sat on a chair twenty minutes, and emptied the bladder by her own effort; is quite bright and cheerful; pulse 80; a small quantity of fetid pus is discharged when pressure is made on the side of the wound, at the point where the pedicles emerge. 6 P. M. Pulse 80; has been out of bed again to empty the bladder.

11th, 9 A. M. Pulse 76; everything going on favorably. Dress wound carefully, and remove the remainder of the pedicle ligatures. Has been up twice to urinate. 10 P. M. Pulse 72; bowels moved once; appetite excellent; has been up four times during the day.

12th, 9 A. M. Dress the wound. Patient feels quite well this morning. 6 P. M. Still improving; pulse 72; there seems a slight tendency to diarrhoea. Order a morphia suppository.

13th, 9 A. M. Much better. Dress the wound, which is rapidly healing.

From this time the patient continued to improve. At the end of three weeks she left her room and walked down stairs. Her recovery was uninterrupted, and at this time (April 16, 1866) is in as good health as at any former period of her life.

*Remarks.*—I make no apology for detailing the foregoing case so fully, for I apprehend that success in ovariectomy, as in other large surgical operations, frequently depends in very great measure upon attention to the *minutiae* of the after-treatment. And, wherever it is practicable, I would recommend that the operator himself, in so far as may be possible, superintend the management of the case. The reasons for this advice are sufficiently obvious. Others may do well—friends may furnish such attentions as are always pleasant to the invalid, and skilled attendants may perform every duty—but there is none who feels a more intense anxiety for the recovery of a patient than he who has jeopardized that patient's life in order to preserve it.—*American Journal of the Medical Sciences.*

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*A New Remedy in Gonorrhœa.* By J. S. PRETTYMAN, M. D.,  
of Milford, Delaware.

In July, 1859, while narrowly observing the effects of oil of erigeron administered in a fearful hæmoptysis, I was led to suspect that it would prove a useful remedy in the treatment of gonorrhœa. Acting upon this presumption, I immediately commenced giving it to a patient then under my care, in whose case all the vaunted specifics had most signally failed. He improved at once, and was speedily cured. Since that date I have prescribed it in about fifty cases, with unvarying success. It arrests the discharge in about seventy-two hours, and effects a cure in from six to eight days. I do not recommend it as a specific in all cases, but design merely to bring it to the notice of the profession as an exceedingly valuable medicine in this disease. Of course all scientific medical

practice is based upon the well-known pathological condition of the structures involved, and this is our unerring guide. When, in recent cases, the urethral inflammation is severe, my plan is to precede the remedy with a full dose of some active hydragogue. A good formula is: R.—Pulv. senna ʒij; pulv. jalapa ʒj; pulv. aromaticus gr. x. M. Add a gill of boiling water and a teaspoonful of sugar, and, when sufficiently cool, agitate, and swallow at a dose. As soon as this operates, give ten drops of the oil on sugar, and three hours later a full dose of spts. æther. nit. in infus. althea, and so on every three hours alternately until the urethral irritation is allayed. Then leave off the latter, and continue the oil until the cure is complete. If the case is not recent, or there is but little urethral irritation, the oil alone is sufficient.

I have used it also in combination with copaiba and other articles, and found such preparations to answer a good purpose, but no better than the oil alone.

The oil which I use is reputed to be that of the *Erigeron Canadense*; but I presume that from the *Philadelphicum* is equal, if not superior, for this purpose.—*American Journal of the Medical Sciences*.

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*Copaifera Officinalis*.—(*Officinal Copaiba Tree*.) By JOSEPH BATES, M. D.

*Natural Order*.—*Fabaceæ*, Jussieu; or *Amyridaceæ*, Lindley.

*Description*.—*Copaifera officinalis*, in the Linnean artificial classification, belongs to class Decandria, order Monogynia.

*Generic Characters*.—Calyx, has four oblong, acute, spreading, concave sepals, sub-united base, within tomentose. The petals are wanting. (By some, the calyx is taken for the corol.) Legume ovate, one seeded. The *copaifera officinalis* is a large, elegant tree, with numerous branches near the top, and covered with a dense foliage. Leaves, alternate, large, primate, composed of from two to five pairs of ovate, entire, obtusely acuminate leaflets, from two to three inches in length, smooth, pellucidly punctate, somewhat shining, petioles short. Flowers white, subsessile, axillary, stamens filiform, incurved, exsert, anthers oblong.

*History*.—The genus *Copaifera* furnishes several species, in different localities, that supply the shops with the oleo-resin copaiba.

These trees are indigenous in various parts of South America, and in the West Indies. Brazil yields the best quality. The juice is obtained by making deep incisions into the trunks of trees, during the wet season, or immediately after. The juice flows freely, being clear and transparent, of an amber color, and about the consistence of olive oil. Its odor is aromatic, and at first rather pleasant; the taste is hot, bitter and nauseous. It is insoluble in water, though it imparts to its odor. Ether, alcohol, oils, and strong alkaline solutions are its solvents. It forms with alkalies a saponaceous compound which is insoluble in water. With one-sixteenth of its weight of magnesia, it forms a solid mass which is used to form pills.

Its constituents are mainly a volatile oil, and a resin which yields copaivic acid. More than one-half of its weight is essential oil. Its specific gravity varies from 950 to 1,000.

There was little or nothing known of this agent, so far as its history unfolds, previous to Piso's day. He furnished the earliest account of copaiba in 1648. This author claims that it cures gonorrhœa, leucorrhœa, and also diarrhœa; he mentions the use of copaiba in the cure of the first named disease by injections.

Marcgrave, who wrote at the same period, speaks of its virtues in dysentery, and other intestinal fluxes.

Morton (1720) included it among the balsamac medicines proper in consumption. From his time to that of Hunter, this medicine seems to have been more used for the treatment of bronchial affections than of gonorrhœa, but at the present day it is universally prescribed for the latter disease, and is regarded in the light of a specific for its cure. Even Hunter was far from appreciating its value, for while admitting that it lessens the disposition of the parts to form matter, he asserts that "not having at the same time the power of lessening the inflammation, it can be of little service."—(Stille.)

Copaiba, especially in the European markets, is often adulterated with oil of turpentine, or fixed oils.

*Action.*—In treating of its action, I shall avail myself of the remarks of Dr. Stille. "The operation of copaiba, according to Ricord, who has most completely investigated the subject, takes place upon the stomach, the bowels, the urinary apparatus, and the skin, and in some rare cases upon the nervous centres.\* Upon the stomach it shows its action by gradually destroying the appetite, exciting eructations with the characteristic smell and taste of the drug, or else nausea, retching, and even vomiting, with gastric

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\*A Treatise on the Venereal Diseases, by John Hunter, &c., Am. ed., 1853.

distress. When it disagrees with the stomach, it is apt at the same time to purge. Upon the urinary organs its influence is more uniform and more evident. It somewhat augments the quantity of this secretion and imparts to it a deeper color, a bitter taste, and a peculiar smell, which is somewhat fragrant. On standing, its surface is apt to be covered with an iridescent pellicle, and it becomes turbid from the presence of poisonous matter, which may be distinguished from albumen by its not readily subsiding, as well as its not answering to the tests for the latter substance. When the dose has been unduly large, it excites some heat and tenesmus in urinating, as well as a frequent desire to pass water, and even hæmaturia, and, at the same time, a feverish excitement of the whole system, fullness and frequency of the pulse, headache and thirst."

Copaiba is evidently absorbed into the general circulation ; this is implied by the peculiar odor which is imparted to the breath, by its modification of the urine, by its action upon the skin, and by its influence upon bronchial inflammations.

The substances which it most closely resembles, both in composition and properties, are the turpentine. Copaiba is said to be somewhat of a stimulant, diuretic, laxative, and in large doses frequently an active purgative. It sometimes occasions an eruption upon the skin, resembling that of measles, and accompanied with an itching, and tingling sensation. Ricord maintained that when it occasioned cutaneous eruptions, its effects on the urinary passages were very slight. These cutaneous eruptions were first observed by Montegre, who described certain red spots as appearing on the skin whenever the urethral discharges were suspended.

Delpech noticed a miliary eruption connected with gastric disturbance.—(Stille.)

Armstrong also observed itching and an eruption of the skin produced by copaiba. In 1828, Dr. Hewson, of Philadelphia, published a notice of several such cases. In two of these, the eruptions resembled urticaria, and in two others it had the characters of roseola. Mr. Judd has also described "a puniceous mottled eruption," and one of maculæ, and Desruells observed urticaria proceeding from this cause. These eruptions are most apt to manifest themselves when the medicine does not agree with the stomach, and they disclose the probability that the disease is not favorably influenced by it. Ricord remarks that it is not uncommon to see patients in whom the running, after having been dried up, reappears along with the cutaneous eruption.

Copaiba sometimes creates alarming symptoms, by its effects on the nervous system. Ricord saw one patient, in whom tempo-

rary hemiplegia was produced, in consequence of taking too large doses, which ceased upon the occurrence of a rubeolar eruption; and in another, an attack of convulsions was terminated in like manner.

Dr. Roquette, of Nantes, believes that copaiba only acts as a curative agent, in affections of the urino-genital organs, by means of the peculiar qualities which it imparts to the urine, and that it is useless in inflammations of these portions of the genital mucous membrane which do not come in contact with the urine during its passage. As it has been satisfactorily proved, that when copaiba is tolerated, it is eliminated from the system almost exclusively by the kidneys, and that consequently it is present in large quantity in the urine. Dr. Roquette considers, that when we administer this remedy, we should endeavor to prevent diarrhoea, vomiting, nausea, etc., as much as possible, in order that the remedy may solely leave the economy through the kidneys.—(Bost. Med. and Surg. Jour., vol. 56, p. 128.)

Oil of copaiba acts very much as copaiba itself, but less powerfully.—(Stille.)

USES—DYSENTERY.—Armstrong was in favor of administering copaiba in protracted and obstinate cases of dysentery, as a means of healing the ulcerated condition of the intestines. He remarks that it was formerly used for this purpose, and that we have been perhaps too hasty in discarding it. Dr. La Roche, as quoted by Stille, has likewise recommended it in the declining stage of acute dysentery, when the stools are mucous rather than bloody. Dr. Hatheway, of Illinois, is very decided in relation to the utility of this agent, in the disease under consideration. He alludes to copaiba as a specific in dysentery, and is inclined to regard it as such in all stages of the disease.

At a meeting of the Medical Society of London, Mr. Roberts related a case of nephritis, in which, after bleeding, and the ordinary treatment of that disease, some inflammatory symptoms still remaining, and suppression of urine more particularly, he exhibited copaiba in ten drop doses three times a day, with the effect of restoring the secretion.—(Lancet, June 27, 1846, p. 705.)

*Chronic Gastro-Enteritis.*—Mr. Roberts has reported it to be very effectual in this disease, when given in doses of from seven to ten minims three times a day, made into an emulsion.—(Stille.)

From its reputed efficacy in diseases of mucous membranes, there is sufficient presumptive evidence that this drug will be found highly useful in many diseases of the alimentary canal.

*Gonorrhœa.*—The use of copaiba in this disease appears to have been introduced by the natives of South America, and the knowl-



edge thus obtained introduced into Europe. During the last century, Hunter and Swediaur brought it into more general notoriety. Accidents frequently teach important lessons in medicine. In 1804 a patient of Ribes, of Paris, took by mistake an ounce of copaiba at a single dose. He was purged, suffered colic and loss of appetite, but the gonorrhœa he labored under was cured.

Drs. Delpesch and Ribes gave copaiba on the outset of this disease, however great the inflammation might be; and they affirm having obtained the greatest advantages from its early employment. Dr. Velpeau, in order to obviate the inconveniences of this remedy when taken in large doses, proposed to administer it in glysters, and numerous successful experiments leave no doubt whatever of the efficacy of this method.

Whenever this method has been had recourse to, it has been more successful, where a laxative has been previously exhibited. After the bowels have been evacuated, and are in a quiet state, then the injection of copaiba should be administered, and the results are the same, as if taken into the stomach. The oil of copaiba was introduced into the French practice by Mr. Dublane, Jr., in the treatment of gonorrhœa. Drs. Bard and Cuellierier witnessed its happy results in thirty patients whom they cured in five or six days of this disease.

It has since been administered by several physicians with complete success. Chopart's mixture is a very good combination, which is prepared with mint-water, alcohol, syrup, aa  $\zeta$ ij; spirit of nitric ether,  $\bar{\zeta}$ j; orange flower water,  $\zeta$ ij M. S. Two tablespoonfuls in the morning, one at noon, and one at night; and continue for twelve days. Ansiaux adopted the plan of using this mixture in 1812, from the very beginning of the attack, and found that it frequently produced a speedy cure.

Armstrong, in 1818, adopted this method on the suggestion of Dr. Dawson, who had for several years been accustomed to its use. Armstrong began the use of the remedy in the very first stage of virulent gonorrhœa, and came to the conclusion, from his own experience, that it would not fail once in twenty times to arrest completely the progress of the disease, if given in sufficient doses, and continued several days after the disappearance of the discharge.

Subsequently, Delpesch (1822) directed, that after reducing the inflammation, if necessary, by local and general depletion, a drachm of copaiba should be administered morning and evening, gradually increasing the dose to twice this quantity three times a day, and giving opium if it purged. Ricord advocates the same treatment, and increases the dose if necessary, and can be tolerated to one ounce in twenty-four hours.

Clarus, in Germany, adopted a more cautious method, beginning with smaller doses of a weak emulsion, and subsequently administering it pure in doses of from twenty to forty drops three times a day.

It is very important to commence the treatment during the forming stage of the attack ; it is then more readily arrested. The remedy should be continued, and gradually diminished, for several days subsequent to the arrest of the discharge.

Mr. J. Hilton recommends first, in gonorrhœa, acetate of potash in half drachm doses every four hours, and he remarks, even where the disease has not yielded, it has been repeatedly found, that after a few doses of copaiba the cure has been completed, and a relapse prevented.—(Braith. part 22, p. 375.)

Copaiba produces in the morbid mucous membrane over which it passes, mixed with urine, an action incompatible with the diseased one ; “hence its mode of action seems to be that of substitution.”—(Stille.)

Mr. Dallas, of Odessa, used several times a day injections of the following emulsion :  $\mathcal{R}$ . Copaiba, 3 v ; yolk of egg, No. 1 ; extract of opium, gr. j ; water,  $\mathfrak{z}$  vij ; and is stated to have employed it, without any other remedy, with complete success.

*Psoriasis*.—Numerous authors could be instanced who have lauded copaiba in the treatment of cutaneous affections. (The following is from the *Boston Medical and Surgical Journal*, vol. 10, p. 271.)

“The internal administration of arsenic, and the topical application of the oil of juniper and of tar, in the treatment of psoriasis, enjoy a certain reputation as is well known among dermatologists. But the local medication is but too often merely palliative, and even arsenic does not always ensure the patient against a return of the disease, while its administration, however prudently directed, is far from being always free from inconvenience. These considerations induced M. Hardy to try other means, and his choice fell upon the internal employment of balsam of copaiba. The following details concerning the treatment now in use in the service of this physician, at the Hospital of St. Louis, are taken from the *Bulletin de Therapeutique*.

“M. Hardy generally commences the treatment in the dose of about three-fourths of a fluid drachm, which he subsequently increases to a drachm, and a drachm and a half. It is given in the morning before eating, and in the intervals of the meals, during the day. It is continued for a considerable time, at least a month, and sometimes longer. It is generally combined with local treatment, but it is sometimes employed successfully alone.

Copaiba thus administered generally causes diarrhoea, which is, however, well borne by the patients, and does not ordinarily prevent them from taking food, even with appetite.

"It rarely gives place to erythema, sometimes produced by this drug. The scaly eruption generally gets well in all places at the same time, and the improvement is not always more marked, at the beginning, in the inferior extremities, as occurs in other modes of treatment. It first shows itself in the parts most lightly attacked, and from thence spreads towards the places of election. When the scales become detached, the subjacent skin is generally sound, though sometimes still a little red. Psoriasis existing in patches becomes converted into psoriasis circinata, the healing beginning at the centre of the patch; and the psoriasis circinata is transformed into P.—guttata."

The following summary of facts, taken from the thesis of M. Paul Dupuy, one of the pupils of M. Hardy, will enable the reader to appreciate the effects of this treatment, and judge how much benefit we can hope to obtain from it:

"A patient who entered the hospital two or three months since for psoriasis, and who was treated by the ordinary remedies (arsenical preparations, baths, ointments, etc.), still retained a small patch of the disease on the left shoulder. On the 12th of February, about a fluid drachm of copaiba was substituted for the arsenical solution; in one week the patch had almost disappeared, and at the end of three weeks the patient was cured.

"A second patient, aged forty-nine years, several members of whose family had been affected with skin disease, had, at the age of twenty-one, an eruption of psoriasis, which disappeared spontaneously at the end of a few months. Afterwards the disease reappeared from time to time; but since 1840, the psoriasis had constantly persisted, sometimes in one place, sometimes in another. At his entrance into the hospital, in November, 1855, he had patches of psoriasis on the elbows, knees, loins, scalp, and ears. He was treated by the arsenical solution, vapor, sulphur and alkaline baths, and ointments containing oil of juniper, and afterwards proto-iodide of mercury; but his psoriasis still remained, on the 28th of February following, in the form of large patches on the elbows, knees and loins—though the scales had diminished in quantity. At this time he was placed upon the use of copaiba, in the dose of a drachm gradually increased to double that quantity. The local treatment was continued, but the arsenic was omitted. At the end of a week there was a perceptible improvement, and on the 25th of March the patient left the Hospital perfectly cured, having continued the copaiba up to that time. He was seen again

on the 11th of June, but presented no symptoms of relapse. In the third patient, the affection dated from five weeks only. It consisted in psoriasis in patches and guttata, having its seat on the elbows, arms, fore-arms, legs and thighs, and was accompanied by severe itching during the night. He entered the Hospital on the 8th of March, and two days afterwards was put upon the electuary of copaiba, in the dose of a fluid drachm at first, gradually increased to a drachm and a half. On the 15th there was a sensible improvement; the guttæ were smaller, and in several places had in a great part disappeared. There were fewer scales, and there was hardly any itching. On the 3d of April there was hardly any of the disease left on the thighs, arms, and posterior part of the leg. In other places the eruption was less prominent and less scaly. On the 15th, general subsidence of the patches in those places from which the scales had become detached. On the 13th of May there was no psoriasis except on the places of election, and the front of the legs. June 1st, the left arm and leg are well; 15th, the right elbow is completely cured; there remain only a few scales on the right knee. On the 20th, the patient was discharged at his own request. During the whole course of the treatment, the digestive functions were regularly performed, and the stools were not more frequent than usual."

*Vesical Catarrh.*—Many authors, such as Hoffman, Bretonneau, Barbier, Delpsch, and Dr. LaRoche, have found copaiba very serviceable in the treatment of this affection. According to Dr. LaRoche, moderate doses are the most successful, because they agree better with the stomach and can be continued for a longer time. He also advised that the medicine should be occasionally suspended, in order to allow the stomach an opportunity of recruiting, and to prevent the risk of too constant an irritation of the affected parts.—(Stille.)

Others employed injections of copaiba into the bladder in these cases, to the extent of two ounces, with a like quantity of barley water, as it would seem, successfully.

*Bronchial Affections.*—This medicine, in bronchial affections, has had its advocates from the earliest period of its history. Many writers have recommended it in the treatment of consumption. Fothergill (1769) pointed out certain cases, in which it would be injurious, such as are attended with bloody and purulent expectoration, referring thereby to cases of pulmonary tubercles. Hoffman and Monroe speak highly of its benefits in chronic pulmonary affections. Halle used this agent in the cure of chronic bronchitis.

Armstrong (1818) regarded it somewhat in the light of a specific, for chronic inflammation of the mucous membrane of the trachea

and bronchia. He administered it in doses, varying from thirty to eighty drops, three times a day. A favorite prescription of Morgagni for chronic affections of the lungs, was copaiba in combination with sulphur. This combination was commended by Armstrong. Dr. LaRoche, of Philadelphia, demonstrated the great advantages of copaiba in chronic inflammation of the lungs in 1827. For the same purpose it was highly prized by Bellinghieri and Bertini, of Turin. Many physicians in this country hold that copaiba in chronic bronchitis, unattended with fever, has greater claims upon the confidence of the profession than any other remedy.

*Leucorrhœa.*—Copaiba, alternated with quinine and iron, three times a day, will often be found serviceable.

*Local Application.*—Formerly copaiba was much used as a dressing for wounds and sores. Sacks recommended it highly as an application to the sore nipples of nursing women. He is confident, if the remedy is applied before there is any loss of substance, it will arrest the evil.

*Chilblains.*—Dr. Ruschenberger recommends its application in chilblains as an excellent remedy.

*Administration.*—It may be given pure, or on sugar, or floated upon water. The dose generally may be from twenty to sixty drops; sometimes gradually increased to one ounce in twenty-four hours. A very good form in which to take it, is that of capsules; or it may be taken in the form of pill with magnesia.

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—The theory that ozone and antiozone are two opposite electrical states of oxygen, and that ordinary oxygen is composed of the two opponents balancing each other, has led to the theory that all matter is in this condition, and several important observations have been made which go to sustain the view.

## EDITORIAL AND MISCELLANEOUS.

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### ATLANTA MEDICAL COLLEGE.

This institution is now in a condition to afford abundant facilities for the study of all the branches of the "healing art." The building, during the scourge of war, was so damaged that an outlay of several thousand dollars became necessary to place it in a condition suitable to the purposes for which it was constructed. This has been done, and now, in point of appearance, it is equal to that of any time since it was built. In fact, the damage to the house, apparatus, museum and library has been repaired, and they are complete in all respects, except the library and museum, which still exhibit evidences of the despoiler's hand. A little more time and nothing will be wanting in the institution to remove the last mark of war's destructive hand.

The amount necessary for these purposes has been donated by the City Council of Atlanta, and while we feel grateful for this timely beneficence, we are encouraged to still greater efforts in making the institution an honor to the City, and a blessing to mankind.

The class of the present session, is respectable in size—even larger than the most sanguine would expect in the ruined condition of the country. In point of devotion to study and gentlemanly deportment, no institution was ever more signally favored. It is by such alumni that the respectability of Medical Institutions is sustained, and the honor and usefulness of the medical profession preserved.

The exhibition of such earnest efforts to advance in the study of science, excites the teachers to increased efforts, in their course

of instruction, to give every facility for rapid and permanent improvement.

The present Session certainly affords a more perfect and thorough course of teaching than has been offered by this institution to any class previously. Besides the addition of one chair to the curriculum of studies, a much more perfect system of Clinical instruction has been adopted. The daily examination of, and prescribing for, fifteen or twenty patients in presence of the class, affords an amount of practical study entirely sufficient for the medical student. That this course of study may be still more practical and useful, the opportunity is afforded, to such as desire it, of assisting in examinations, writing and putting up prescriptions, &c. In addition to this, the regular Medical and Surgical Clinique, occupy each, one hour, two days in the week. These hours are occupied with lectures on interesting medical and surgical cases.

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#### EXTREMES IN THERAPEUTICS.

Stahl, the founder of the *expectant* system of practice, was the first leader in *one-ideal* systems. Hahnemann rose next; but to make a new system—one differing from that which had already been instituted, and yet dealing kindly, gently and softly with the sick, and giving very little trouble to the physician—he found it necessary to promulgate a new Therapeutical theory. Infinitesimal doses struck the founder of this new system as the most potent quantity, and at the same time safe, economical and convenient.

Extreme views naturally lead to the adoption of *one-ideal* systems. A desire to discharge the duties of professional life with the least possible tax upon the time and exertions, leads to some system of expectant practice. On the other hand, a desire to do a great deal without the ability to discriminate between those cases requiring active medication and those that need nothing, or the disposition to exercise the necessary caution in the treatment of disease, is apt to lead to the opposite and still more

injurious extreme. The fact is patent to the most careless and superficial observer, even outside the profession, that the constant drugging too often practiced, without any rational reason for such a course, tends rather to increase than palliate or cure disease. The comparison between expectant and over-drugging systems is generally prejudicial to the latter; hence, homœopathy is selected by the invalid as the less evil. "If he does me no good, he will do me no harm," consoles the Valetudinarian as he swallows the sweet morsel in the form of homœopathic pellets. Again, a propensity prevails, in and out of the profession, to make any important and useful medicinal agent, or course of treatment, applicable to every form of disease. Water, having been known to produce very decided and beneficial effects, is paraded by a certain sect as the only agent necessary in the treatment of all manner of diseases. So the discovery that the local application of pepper to certain slight and superficial inflammations of the mucous membrane of the throat, instead of increasing, actually allays the excitement, led to the ridiculous theory, promulgated by Thompson and Howard, that all manner of disease is best treated by stimulants—that "heat is life and cold is death." In accordance with this theory, inflammatory and febrile affections were considered subject to cure by, not only cerebral and nervous stimulants, but those acting most actively upon the heart itself.

Such one-ideal systems or wholesale theories are very convenient under certain circumstances. The charlatan who never knew, nor expects ever to become acquainted with the first principles of physiology and pathology, can very readily administer certain remedies under so simple and universal a theory—one which requires no discrimination, judgment, science or common sense in order to apply remedies in every case of disease, whether local or constitutional, specific or general, sthenic or asthenic. The learned and scientific physician also finds a convenience in being able to soothe his conscience with some such general theory, when—from an indisposition to perform the mental and physical labor necessary to investigate the pathological condition, nature and tendencies of the diseases presented, and apply such remedies as are suited to each individual case—he does not choose to take



the usual laborious course of investigation and prescriptions. Such are prone to imagine a kind of unity of diseases, requiring for their cure, in the main, about the same course of treatment—that all are sthenic and necessarily require depletion or other antiphlogistic means; or, that asthenic tendencies always exist, and stimulants of every class are not only admissible, but highly beneficial always. This opinion of unity of disease, or identity of immediate cause, is not the production alone of the present age, but forms the characteristic peculiarities of writers who flourished more than a century ago—most of which, as in the present day, originated in misconception of the therapeutical action of remedies. In the first place, a great mistake is often made by practitioners in too readily concluding that the favorable termination of disease is necessarily ascribable to the effects of the remedies administered, when, in fact, patients often recover, not only without any assistance from the treatment instituted, but even in despite its injurious effects. Statistical tables, therefore, incautiously gotten up, often lead to the establishment of false theories and erroneous systems of practice. Many diseases have a regular period to run, and at the end of this time often terminate favorably without therapeutical assistance, while, in more violent cases, the only safety resides in the action of medicinal agents. Again, the medicinal properties of certain agents are not properly understood and appreciated. Stimulants, for instance, are often used as such, indiscriminately, without regard to the part of the body which they directly excite. A stimulant to the brain does not necessarily excite unduly the heart, and *vice versa*. The various stimulants of the nervous centres and antiphlogistic means are not, therefore, antagonistic, as is too often supposed. The fact, then, that alcohol, opium, etc., are admissible, and often useful in inflammatory diseases, is no evidence that depletion and other sedatives and refrigerants are not demanded. In pneumonia, for example, when from the violence of the disease the nervous energies are depressed, brandy and opium will restore the vital powers, while the usual antiphlogistic means are resorted to for the relief of the local phlegmasia.

## MEDICAL DEPARTMENT OF THE UNIVERSITY OF LOUISVILLE.

We have received a pamphlet showing the re-organization of the Faculty of the above-named institution, and find that two of the old Faculty resigned the first of this year, and that the other members were removed by the Board of Trustees.

"The Record of Facts in relation to the Dismissal of the Faculty," as given in the pamphlet before us, was written by the old members, and goes to show that undue *pressure* was brought to bear upon the City Council, whose duty it was to fill several vacancies in the Board of Trustees which occurred about the first of the present year, from expiration of their term of service. It is alleged that the pressure was exerted by the aspirants for places in the Faculty, and, as is hinted, political reasons made the basis of operations.

If this be so, we think it augurs badly for the future prospects of this old and respectable institution. If proscription is to be the order of the day, on *neutral* or middle ground, with medical colleges, and the proscribers savor of radicalism, it strikes us that the field for supply of students will be somewhat limited to such schools. It is not at all probable that students, convenient to Western and Northern colleges, will come down to Louisville, nor is it likely that students from a warmer climate would feel comfortable in Louisville during winter under such circumstances as are said to surround the new Faculty. Dr. Bemiss, a member of the old Faculty, received and accepted an invitation to a chair in the Medical Department of the University of Louisiana, New Orleans.

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*Trichiniasis*.—We make the following extracts from an article in the St. Louis *Medical Recorder*, by Dr. J. H. Wilson, of Iowa, confirmatory of former reports on this subject, and intimating its probable identity with *hog cholera* :

Henry B. died June 3; Albert L., the 8th; Mr. B., the 15th; and Mrs. B., the 17th. *Post mortem* was held over Mr. Bemis,

but practically no new facts were elicited. *Trichinæ* were discovered in as great abundance as in the muscles of the boy previously examined, some again having motion. Whitfield was able to ride out in the country on June 4. After their cases in town had been diagnosed trichiniasis, Dr. Ristine, one of the consulting physicians in these cases, came to the conclusion that some six persons, patients of his, residing in Maine township, this county, twelve miles north-east of Marion, who were affected precisely similar to these cases, were laboring under the same disease. The persons affected, three girls and three boys, aged respectively 16, 14, 14, 11, 9, 8, children of M. C. Jordan, W. Jordan, B. F. Jordan and Widow Daggett, on their way from Sabbath-school, April 22, stopped at a house and took a lunch of sandwiches, in which raw, smoked ham was used. Two days afterward, all but one of them were attacked with diarrhoea, developing into all the symptoms of trichiniasis. Fortunately, the parents of the children affected promptly administered to each of them an active dose of cathartic pills upon their showing the first symptoms of sickness. The eldest girl exhibited the symptoms in a reversed order—lameness of the muscles on the second, and diarrhoea on the third day. She was more severely affected than the others; had inflammation of the lungs, and, when seen by Dr. Ristine on the 19th, was scarcely able to walk, and had also a cough and hoarseness of voice. No cathartic was given her at first as to others. As anasarca was the most prominent symptom with the cases Dr. R. had to do with, he prescribed potass. bitart and jalap, combatting the symptoms as they arose on general principles. Portions of the same ham eaten by the family were subjected to microscopical examination, and were found to be swarming with myriads of the parasites. The same meat was eaten by the family to which it belonged, when well cooked, with no unhappy results. The hog was selected for its healthy appearance from a herd which was affected with hog cholera last fall, but, recovering, was fattened and killed for family use in January last. This, you see, forms another link in the chain of testimony, that trichiniasis and hog cholera are one and the same disease. Therefore, we think it behooves the medical profession to instruct the public of the connected nature of these two destructive maladies, in order that another such endemic as has occurred here may, as far as possible, be prevented.

## BIBLIOGRAPHICAL.

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*A Treatise on the Principles and Practice of Medicine, designed for the use of Practitioners and Students of Medicine.* By AUSTIN FLINT, M. D.

The above is the title of a work before us, received through the courtesy of the publisher, Henry C. Lea, Philadelphia, from the pen of the eminent Professor of the Principles and Practice of Medicine in the Bellevue Hospital Medical College, New York. The volume contains 867 pages, and is divided into two parts, the first of which contains about one-eighth of the matter and is devoted to the Principles of Medicine, or General Pathology, and the remainder and bulk of the work is devoted to Special Pathology, or the Practice of Medicine.

These divisions are preceded by an introductory chapter which contains a brief but lucid reference to the following points: Scope of the term Medicine; use of the term in contradistinction to surgery and obstetrics; subdivisions of the different departments of Medicine or Specialities; the general object of the work; meaning of the phrase Principles and Practice of Medicine; definition of Pathology; division into General and Special Pathology; nomenclature of diseases; subdivisions of General Pathology, viz.: morbid anatomy, and morbid changes of the fluids of the body; etiology; symptomatology; diagnosis; prognosis; prophylaxis and therapeutics; relations of these subdivisions to Special as well as General Pathology; definition of disease; definition of health; relationship of Pathology to Physiology; progress of pathological knowledge.

Part 1st, or that portion of the work devoted to the Principles of Medicine, or General Pathology, contains three chapters upon the Anatomical Changes in the solid parts of the body, three upon the Morbid Conditions of the Blood, and one each, upon the

Causes of Disease or Etiology, Symptomatology, and General Therapeutics. Part 2d, or the Treatise upon the Practice of Medicine, or Special Pathology, is divided into six sections, the first of which is divided into eleven chapters embracing the Special Pathology and treatment of pleuritis, pneumonitis, bronchitis, emphysema, asthma, hemorrhagic affections, affections of the larynx and trachea and pulmonary tuberculosis. The 2d treats exclusively of diseases affecting the circulatory system, and inflammatory affections of the heart; valvular lesions with enlargement of the heart, and enlargement of the heart without valvular lesions. Section 3d is devoted to diseases affecting the digestive system, with separate chapters on inflammatory affections of the alimentary canal; structural affections of the stomach; structural affections of the intestinal canal, involving obstructions; functional affections of the stomach and intestines; cholera; intestinal worms; inflammation of the peritoneum, and peritoneal dropsy; diseases affecting the collatitious or solid viscera of the abdomen.

Section 4th is made up of ten chapters devoted to diseases affecting the nervous system and respectively to inflammatory affections of the meninges of the brain and spinal cord; inflammatory affections and structural lesions of brain and spinal cord; inflammatory paralysis, and the neuroses, viz: neuralgia, chorea, epilepsy, hysteria, catalepsy, ecstasy, somnambulism, tetanus, rabies, delirium tremens, alcoholism and nervous asthenia.

Section 5th is appropriated to diseases affecting the genito-urinary system, with chapters on inflammatory affections of the kidneys, structural affections of the kidneys, and diseases of the supra-renal capsules, Addison's disease; involuntary seminal emissions, spermatorrhœa and impotence being included under the latter head.

Section 6th contains twelve chapters devoted to fevers and other general diseases, with special observations upon continued fevers; periodical fevers, diphtheria; acute articular rheumatism; gout and scorbutus, or scurvy.

The object of the work, as set forth in the preface, is to present such a digest of the Principles and Practice of Medicine as will be alike serviceable to the pupil in the prosecution of his studies

of disease, and to the physician engaged in the practical duties of his profession. Very little space is occupied with past opinions or doctrines which have become obsolete. Discussions relating to mooted pathological questions are barely entered into, and subjects belonging to other departments of instruction are for the most part omitted; hence for information on matters relating to surgery, obstetrics, the diseases of women and children, cutaneous diseases, and the details of the *Materia Medica*, the reader is referred to other works, and the object of the volume seems to have been well sustained in keeping prominently in mind the practical applications of medical knowledge to Diagnosis, Prophylaxis and Therapeutical indications.

Upon a careful examination of this work, we have no hesitation in recommending it as one more nearly representing the existing state of the science and art of medicine, and more nearly reflecting the views of those who exemplify in their practice the present stage of a progressive pathology, than any other American book upon Practical Medicine. As illustrative of the views to which we allude and desire specially to commend and of the style of the work, we insert the following extract upon the subject of bloodletting.

“A great change has taken place within the last few years, with respect to bloodletting in the treatment of acute inflammations. This measure was formerly thought to be highly important, and was rarely omitted. It is now considered by many as seldom, if ever, called for. The infrequent use of the lancet now, contrasted with its frequent use twenty-five years ago, constitutes one of the most striking of the changes in the practice of medicine which have occurred during this period. It can hardly be doubted that this measure was formerly adopted too indiscriminately, and often employed too largely; but, with the natural tendency to pass from one extreme to another, it may be that the utility of bloodletting in certain cases, at the present time, is not sufficiently appreciated.

Experience and pathological reasoning combine to show that bloodletting does not exert a direct controlling effect upon an inflammatory disease. It may exert a powerful immediate effect as a palliative measure, and whatever curative power it may possess is exerted indirectly. Its therapeutic action consists in lessening the frequency and force of the heart's action; in other words, in

diminishing the intensity of symptomatic fever. In the early period of an acute inflammation accompanied by high febrile movement, as indicated by a pulse accelerated and of abnormal strength, the abstraction of blood affords relief, and may contribute to a favorable progress of the disease. It should enter into the treatment of a certain proportion of cases, provided other and more conservative means for the same ends are not available.

The evils of bloodletting arise from its spoliative effect upon the blood. It diminishes the red corpuscles, and these, during the progress of an acute disease, are not readily reproduced. It induces, thus, the anæmic condition, and in this way impairs the vital powers. It will be likely to do harm, therefore, whenever it is important to economize the powers of life, and it may contribute to a fatal result in diseases, or cases of disease, which involve danger of death by asthenia.

The useful effects of bloodletting may frequently, if not generally, be obtained by other means which require less circumspection in their employment, because, if injudiciously resorted to, they are in a less degree hurtful. The mass of blood may be temporarily lessened by saline purgatives and diaphoretic remedies, conjoined with a restricted ingestion of food and liquids. Depletion is obtained in this way without spoliation or impoverishment of the blood. The frequency and force of the heart's action may be affected by nauseant sedatives such as tartar-emetic, ipecacuanha, etc., and by direct sedatives, viz: digitalis, aconite, and the veratrum viride. By saline depletories and sedatives, the symptomatic fever may be modified without the expenditure of blood, and thus the evils of bloodletting avoided. The advantage of bloodletting consists mainly in the promptness of its operation. Several hours are required to secure results from the means employed in lieu of bloodletting, while the effects of the latter are produced in a few moments.

In accordance with these views, bloodletting is never indicated by the fact simply that acute inflammation exists; it is a measure directed, not to the disease *per se*, but to circumstances associated with the disease. The state of the circulation, and other circumstances, furnish the indications for the employment of this measure. It is admissible if, with the development of inflammation, there exist high symptomatic fever, the pulse denoting augmented power of the heart's action; the patient robust and in good health when attacked, and the disease not involving danger of death by asthenia. The measure is admissible under the conditions just stated, whenever the promptness with which its effects are obtained renders it desirable to adopt it in preference to other measures

producing the same effects with some delay. *Per contra*, blood-letting is not admissible when the development of inflammation is not accompanied by high symptomatic fever, and the pulse does not indicate augmented power of the heart's action; nor when the patient was not in good health when attacked, nor when the constitution is feeble, nor when the disease involves danger of death by asthenia. These rules of practice, while they accord to blood-letting therapeutic value, undoubtedly restrict its use within narrow limits.

Applying these rules to the disease under consideration, a patient in the first stage of acute pleuritis, robust, perhaps plethoric, suffering from severe pain and a sense of oppression, with a strong non-compressible pulse, will derive immediate relief from the abstraction of from ten to sixteen ounces of blood. The loss of this quantity of blood under such circumstances, in a disease like this which does not tend to destroy life by asthenia, will give rise to no evil results, but will be likely to affect favorably the progress of the disease. On the other hand, a patient feeble or perhaps anæmic, with a pulse denoting excited action, not increased power, should not be bled, notwithstanding the local symptoms would undoubtedly be thereby relieved. By impairing the vital powers, the loss of blood will do harm, and is not admissible, under these circumstances, merely as a palliative remedy. And, in the first case, if the local symptoms do not urgently call for immediate relief, other measures may be substituted for the bloodletting.

Before leaving the consideration of bloodletting, several incidental points may be briefly noticed.

This measure is perhaps more applicable to the treatment of inflammation affecting the pulmonary organs than to the treatment of other inflammatory affections, in consequence of the relations of the former to the circulation. The free passage of the blood through the pulmonary circuit seems to be promoted, and the functional labor which the lungs perform is diminished by the abstraction of blood. At all events, relief of the sense of oppression and dyspnoea attendant on the early stage of acute inflammation of any of the pulmonary structures is more quickly and effectually procured by bloodletting than by other measures. Were it not for its ulterior effects, it would be invaluable as a palliative measure in pleurisy and other inflammatory affections within the chest.

The evils of indiscriminate and excessive bloodletting are manifested by a larger rate of mortality in those diseases which tend to destroy life by asthenia, and it can hardly be doubted that the death-rate has been diminished by a much more sparing use of the



lancet within late years. But the results of injudicious bloodletting are manifested in cases which end in recovery, as well as those which end fatally. These results consist in a protracted convalescence and subsequent feebleness. The cases of different inflammations treated formerly by bloodletting and other measures entering into the so-called antiphlogistic method, and the cases now treated otherwise, present a striking contrast as regards the condition of patients during convalescence and after recovery.

The opinion is held by some that diseases, and the human constitution, have undergone a notable change during the last quarter of a century, and that bloodletting and other antiphlogistic measures are less appropriate now than formerly, on this account. This opinion seems to me not well founded. After a professional experience extending beyond the period just named, I do not hesitate to express a conviction that acute inflammations at the present day are essentially the same as they were twenty-five years ago, and that antiphlogistic measures were no more appropriate then than now.

Were it true that such changes have occurred, the fact would strike at the root of medical experience. If changes requiring a revolution in therapeutics are liable to occur with each successive generation, it is evident there can be no such thing as permanent principles of practice in medicine; the fruits of experience in our day, which so many are striving to develop, will be of no utility to those who are to come after us.

In addition to general bloodletting, or the employment of venesection, much importance was formerly attached to the abstraction of blood by cups or leeches applied in the neighborhood of the inflamed part. Local bloodletting, in some cases, is more convenient than general; but, so far as the abstraction of blood is concerned, it is difficult to conceive that it is a matter of much importance from what part of the body or vascular system it is taken. Whether it be abstracted by means of cups, leeches, or the lancet, the benefit or injury will depend on the quantity withdrawn in a given period. Whatever advantage may accrue from the removal of a certain amount of blood by cups or leeches, over the abstraction of the same amount by venesection, must be derived from the operation of the former as revulsive measures."

Upon the whole we would most earnestly recommend Dr. Flint's work to the profession as possessing claims to merit of the highest order.

*A Practical Treatise on the Diseases of the Sexual Organs of Women.* By F. W. VON SCANZONI, Professor of Midwifery and Diseases of Females, in the University of Wurzburg, etc. (Translated from the French, and annotated by Augustus R. Gardner, M. D., New York.)

This is the title of a work lately received from the publisher, Robert M. DeWitt, New York.

We learn the work has been published for several years, but has not yet, to any extent, fallen into the hands of Southern readers, on account of the recent war. We do not know, from the publication itself, when it issued from the press, but infer, from the entry for copyright, in 1861, that about that year it made its appearance to the American reader in his own language. Throughout the work we find additions and comments, interspersed by the translator.

We feel warranted in stating, even from the imperfect perusal allowed, that no medical work, which it has been our privilege to examine recently, will afford more practical information to the physician than this. It is not our purpose to write an extended review of the book, nor shall we be satisfied with what may seem to our readers as a *formal puff*.

No class of diseases has been less understood and so unsuccessfully treated, as that to which the author confines himself in the work before us. In the early part of our professional career, no disease was so unsatisfactorily managed as uterine affections, under the then usual system of medication. Practitioners then, with volumes before them on this subject, were compelled to grope their way in the dark, so far as the true pathology and rational treatment of certain of these diseases were concerned. The terms applicable to symptoms—the result of various and, in some instances, opposite pathological conditions—were used as the names of uterine diseases. Under these circumstances only occasionally could success be reasonably expected. It is only necessary to mention the single symptom, leucorrhœa, arranged and described in the catalogue of uterine diseases by the writers of less than thirty years ago, to show the utter darkness that surrounded the practitioners only the fourth of a century since.

Enterprising minds at this period necessarily sought practical facts, and a more rational course of treatment than was afforded by the text books of that day. Von Scanzoni, as exhibited in the Treatise before us, labored to perfect a more rational system of treating diseases peculiar to females.

We cannot too highly recommend this work to the practitioner, as well as to the student of medicine. The simplicity of arrangement, and plainness of style adopted by the author, prove his determination to afford practical facts and useful suggestions, rather than make a display of useless learning and an array of unmeaning names. In treating of *some* of the diseases which have the symptom, leucorrhœa, the author thus describes one of the most common, under the head of "Inflammation of the mucous membrane of the uterus":

"Like every organ covered with a mucous membrane, the uterus is, upon its internal surface, exposed to those catarrhal and croupy inflammations which generally affect mucous membranes. The former are ordinarily observed in the non-pregnant state, while the latter are more often observed in the puerperal condition."

In giving the pathological anatomy of acute catarrh of the uterine mucous membrane, we have the following:

"The principal changes take place in the internal surface of the organ. The mucous membrane presents, principally in the portion which lines the uterine cavity, properly so called, an intense redness which is often spotted, the red places corresponding to the artificial openings of the utricular glands, which are surrounded by a fine capillary net-work, very strongly injected. Furthermore, the mucous membrane is very œdematous, softened, thickened, and projects in some points into the uterine cavity. It is easier than in the normal state to separate from the subjacent tissue larger or smaller shreds; and besides that, different portions of more or less extent are found deprived of their epithelium."

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ORIGINAL COMMUNICATIONS.

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ARTICLE I.

*Milk-Sickness: Its Pathology and Treatment.* By J. M. JOHNSON, M. D., of Atlanta, Ga.

Having had an experience of twelve years in the treatment of milk-sickness, at the suggestion of a friend, I have determined to give the readers of the Atlanta Medical Journal the result of my own observation as to the cause and proper treatment of the disease.

It is sad, indeed, to think of the waste of life and the ruined constitutions, that have followed in the footsteps of this terrible malady; and I regret two things to-day, when I think the subject over: 1st, My unphilosophical treatment of it for ten years, and 2nd, That, after I had learned to treat it successfully, I did not remain in the same locality ten years longer, as some compensation, to say the least of it, for the good I had failed to do during the first ten years. But every neighborhood has its oracle; there is always some man, who, according to the public judgment, knows more than anybody else; and if you go contrary to the views of this Magnus Apollo, and your patient dies, by the com-

mon consent of all your enemies—and who does not have them? you are chargeable with his death.

One of the greatest evils the profession of medicine has had to contend with, has been its authorities. Everything you say, everything given, must be done *ex cathedra*, or some apostle of Sleepy Hollow, without tact or judgment, or perhaps from a motive of selfishness, will condemn you, from these monstrous volumes of waste paper, yclept authorities. In the meantime, progress is retarded, genius, talent and learning have had to take the bit in their mouths, and some oracle, who has ceased to be able to think, holds the reins. Many have yielded the contest at the threshold and gone to other pursuits; many more have sunk to mediocrity; whilst comparatively few have asserted their right to independence of thought and attained their true altitude in the vast domain of medicine.

The history of milk-sickness is very correctly given in Doctor Daniel Drake's great work on Medical Topography, also in Eberle and Wood's Practice of Medicine, and by a large number of talented gentlemen in the various medical journals of the country for the last thirty years. To these and a vast number of authorities not enumerated, I refer the reader.

I first saw milk-sickness in 1832, in the county of Daviess, State of Kentucky, on the flat white oak ridges in the southern part of the county, between Panther Creek and Green River. More or less of it occurred every year, but dry seasons were most favorable to its development, and the more unmanageable cases occurred about the coming of frost in September and October.

The cattle are always first affected, and the fat ones more liable to it than the lean. I have known horses to have *trembles* (as the disease in lower animals is termed,) and to die of it, but it is not of frequent occurrence. Dogs and buzzards, and domestic fowls, cats, &c., &c., have it and die of it. The flesh of all animals affected with it is poisonous. Persons who neither eat milk, butter or beef, have taken the disease and died from eating chickens that had it. Hogs are not liable to it, and my recollection is, that sheep are not. Doctor George B. Wood, in his work on the Practice of Medicine, expresses the opinion that the flesh of diseased

animals is rendered innocuous by proper cooking, and gives an instance of a butcher in Cincinnati, killing annually one thousand beeves from the infected districts, and not a case of milk-sickness has occurred from it. This is all erroneous. Cooking does not even modify the poison, and it is a notorious fact, that animals affected with trembles cannot be driven five miles, even in a walk. If they can be driven from the western reserve to Cincinnati, it is proof conclusive that they are free from trembles. Where the precaution is taken to drive a brute intended for slaughter violently two or three miles, and it is found free from trembles, the flesh may be safely eaten.

Milch cows are rarely affected, although the milk poisons the calf, which has to be held up to suck, but if the calf dies, and the secretion of milk is suppressed, the cow then takes the trembles.

The poison seems to reside in the new unskimmed milk, and in the butter. Buttermilk is thought to be free from it. Upon this point the evidence appears to be conclusive.

The best clue to the cause of milk-sickness is to be found in the topography of the districts of country where it prevails. In the counties of Daviess and Muhlenberg, the infected places were the flat ridges between Panther Creek and Green River, on the North and Pond and Green Rivers, on the South—a region of country about twenty-five miles square. I never saw the disease on the high hills or the rich bottom lands. So far as my experience goes, it was confined to the flat clay ridges, which in some instances run up to the river bank. The growth is white and black oak, hickory and gum, and on the banks of the little streams sugar tree, poplar and walnut. In a few localities carboniferous limestone exists, also stone coal and petroleum; but generally an inferior sand stone is found in detached masses cropping out of the sharp hills. The soil is what is known as “good mulatto soil,” with a tight clay substratum, interspersed with iron and ochre. Where wells have been sunk, generally a few feet from the surface a soft sand stone is found, which is readily removed without blasting, and immediately below this rock the slate strata is found. The country is badly watered; there are few good springs, and still fewer good wells. The water is generally im-

pregnated with magnesia or some salt that renders it both disagreeable and unhealthy. Chills and fever, congestive fever, typhoid fever, &c., &c., abound everywhere. The disease seems to have had a nidus beneath the shade of every tree, and only yielded to the axe and the plough as the forest was felled and the stubborn glebe upturned to the sun.

Dr. Wood classes this amongst the zymotic diseases. It is without sthenic inflammation, and the alterations found to exist are the result of inertia or an asthenic state of the vital forces. The very first symptom is a feeling of lassitude. This may last for a day or a week, before the appetite is impaired, or the bowels cease their functions. The period of incubation culminates in disease of the arachnoid membrane, the medulla oblongata, and the nerves covered by the arachnoid in their passage from the encephalic cavities. At this stage, the sick stomach and vomiting begins, not as a consequence of inflammation, but because the stomach is paralyzed and only acts when it is full and can contain no more. Then the patient is turned over, and the contents of the stomach run out almost without an effort. There is then no more vomiting until the stomach gets full again, and this will depend upon the amount of secretion, which is sometimes considerable, and the medicines and other substances swallowed. It may be two or four hours, or even longer, before it recurs again.

It is clear to my mind, that the very first effect produced is a diminution of the vital forces, and all the other symptoms are but concomitants. The appetite is generally the last of the healthy functions to give way. This is preceded by anorexia, and finally loathing of food. The same paralyzed condition that exists in the muscular and nervous coats of the stomach, extend also to the bowels. In a few hours, from a healthy condition of the functions of the bowels, the most obstinate constipation sets in, and so completely are they paralyzed, that not the least movement of them can be observed. I have seen this condition last for a week, or even two weeks, without a solitary observable peristaltic movement, without pain or swelling, or tenderness to pressure. This is due to the complete insensibility of the bowels, from the loss of nerve influence, and to the absence of inflammation and gases.

Dr. Trafton, of Evansville, Indiana, who was the first man on this continent, I believe, to rationalize the pathology and treatment of this disease, and who was a man of strong observation and great practical good sense, made repeated post mortems, disclosing the existence of subacute inflammation of the bowels and stomach, not traceable to vascularity from phlegmasia of the sanguiferous system, but the presence of hardened feces, long in contact with the mucous surface of the bowels, with incidental inflammation of the stomach from the action of injudicious remedies.

We come now to the isolated question, What is the cause of milk-sickness? It is admitted not to be malaria. It is not water, nor a mineral poison, nor the dew, nor grass; nor is it a shrub or a weed; nor is it an inorganic poison exhaled from any known substance. The cause, whatever it may be, is clearly non-volatile, and is not taken by inhalation or absorption, but received into the stomach and its deleterious effects communicated first to the brain, which is followed by loss of energy; then to the arachnoid membranes, and lastly to the pneumogastric and great sympathetic; thereby destroying the whole nervous energy and nervous sympathy, and leaving all the organs without this wonderful agency, so necessary to the performance of their functions in health or to recovery in disease.

I am of opinion that this poisonous agent is the mushroom, and whilst I am not able to demonstrate the fact from an actual test, still it is the only conclusion justified by the facts at which I have been able to arrive. More than twenty five years ago, while riding over a portion of the district of country described as abounding in milk-sickness, with the late Hon. Albert G. Hawes, of Kentucky, on a poor scanty piece of ground, covered by a small scrubby beech tree, he pointed out to me what he called a "poison mushroom," and said, his mother had frequently used it to destroy house flies. Never having been able to distinguish one fungi from another, I dismounted at once, and secured a number of plants, and, after a careful examination of them, wrapped them up and took them home with me.

This specimen was of a dirty white, and evidently two or three



days old. The pedestal was about two and a half inches in length, and just below the stool, or top, there was a frill or ruffle, very delicate, with convolutions as perfect as if made by a crimping iron. The top of the best specimen was about three inches across; the odor was slightly saline and ammonical, but nearly tasteless. Upon reaching home, I prepared the fly bait by bruising the mushroom and adding sugar and new milk. The flies collected in great numbers, and soon devoured all of the fluid, and continued to suck away at the mass until it became dry. They seemed to enjoy as a great rarity what I had fondly hoped would kill the last one. The poison was prepared in the morning; by dinner time they were buzzing about in great confusion, and it required a constant effort to keep them off me. Finally they settled down on the floor and on the furniture, where they died in immense numbers. A favorite cat crept up to the vessel, and when observed and driven off was eating vigorously. What the flies left was thrown to a flock of young chickens, and was eaten by them. The cat died with all the symptoms of trembles, and so did the chickens.

Upon a further examination of the "cryptogamous kingdom," I found this variety more rare than any of the others, but in sufficient quantities to account for all the milk-sickness prevailing in the locality.

The late Professor J. K. Mitchell, of Philadelphia, with a most praiseworthy enthusiasm, entered into an investigation of the cryptogamic origin of disease, in contradistinction to the theory of Lancisi, McCullough and Craigie, as to its miasmatic origin; and, whilst candor compels me to say he has not made a clear case of it, he has laid the foundation upon which a great superstructure will be built to the benefit of science and humanity and the immortality of some future discoverer. The subject is an intensely interesting one, and I know of no more inviting field to the friend of science and humanity.

Fungi and other cognate varieties of cryptogami, according to Dr. Mitchell, are almost innumerable, and all more or less poisonous. The *lichens* are peculiar to the dry, hard, scanty earth, and are non-volatile. The *algæ* flourishes in water, which it impregnates with its poison, and is set free by evaporation, and taints the

atmosphere with disease and death, whilst the fungi are found everywhere and are more noticeable because of their size and number. I respectfully refer the reader to Dr. Mitchell's five essays on this subject, which will be found curious and instructive.

But to return to the subject. Where the disease is intercurrent with any of the varieties of fever common to the locality, the vomiting is more active and the general distress greater. Nor has this complication been unusual, especially in autumn. Dr. Byford, of Indiana, (*Nashville Journal of Medicine and Surgery*, December, 1855,) an able descriptive writer and good observer, falls into the error of classing these complications as a variety of milk-sickness, whilst in fact there is but one disease, presenting universally the same general phenomena, exceptional only when intercurrent with other diseases—the boundary of each being clearly defined and readily traceable to distinct causes.

The first symptom is that of weariness and lassitude; imperfect respiration; fullness of the head; drowsiness, with disturbed and unrefreshing sleep; anorexia; thirst; redness and swelling of the eyes, which are partly open when sleeping; a disposition to snore; twitching of the hands and feet and muscles of the face. Sometimes, but not generally, the vomiting is a corollary symptom, but is ordinarily the beginning of the second stage. The pulse is a little fuller, but not accelerated; diminished warmth of the body, especially of the extremities. These symptoms continue from a few hours to several days. When the second stage begins, this is ushered in by vomiting, with an aggravation of all the symptoms enumerated above. The heat of the body is diminished; the pulse is weaker; the heart throbs heavily; the eyes are opened and shut slowly; the answers to questions are hesitating and imperfect, resembling a man in a state of beastly intoxication, and when aroused denies having been asleep; complains of an indescribable oppression and a feeling of utter despair; the skin becomes dusky, with a purplish redness about the cheeks; the tongue is covered with a dark slime, and when asked to show it only puts out the tip. The vomiting occurs at irregular intervals, and only when the stomach gets full, and then the contents seem to run out of him when turned on his face and his head is lowered. The

matter ejected is generally dark, and greenish, or brown, abounding in a tenacious lymph-like substance, which separates from the more fluid portion after standing a short time. Sordes collect upon the teeth and angles of the lips, whilst from the first there is an utter palsy and deadness of the bowels. There is a peculiar odor of the breath, unlike anything else, resembling a "mixed smell of chloroform and salivation." [Dr. Byford.] The thirst is inordinate, not only for water, but a "constant craving for spirituous liquors." The abdomen, at first natural, becomes contracted and hard, and the throbbing of the aorta may be felt from the "epigastrium to the bifurcation of the vessel." [Wood.] All of the secretions are either partially or wholly arrested except a tenacious mucus, which accumulates in large quantities in the stomach, and which changes from a dirty white at first to yellow, green, blue, brown, and finally, losing its tenacious quality, becomes black, "resembling the black vomit of yellow fever." [Wood.] After an indefinite period the bowels suddenly act, which is either followed by a general improvement and final recovery, or a fatal collapse from a disorganisation of the blood and, according to Dr. Trafton, of the mucous membrane of stomach, bowels and liver.

Of the nature of milk-sickness, in view of what I have already said, the reader will find little difficulty in anticipating the conclusion at which I have arrived—viz., that it is a deadly poison, producing its first effects upon the brain; secondly, upon the arachnoid membrane; thirdly, upon the nervous system; fourthly, upon the heart, lungs, stomach, bowels and liver; and, lastly, upon the circulation. The weariness and lassitude clearly prove the loss of nervous energy from disturbance of the cerebral mass; the symptoms which usher in the second stage indicate, what frequent autopsies have established beyond peradventure, that the arachnoid is the seat of inflammation; the total paralysis of the bowels and liver, and the loss of tone and function of the stomach, heart and lungs, show that the pneumogastric, great sympathetic and spinal nerves are implicated in the disaster to the brain; and, finally, the blood, having no outlet, either through the intestinal canal, liver, kidneys, lungs, or skin, through which to throw off not only the

foreign poison it contains but its own effete matter, becomes itself a poisonous mass. I assume this poison to be non-volatile and deadly, and that, unaided, there would be few if any recoveries. But the effect produced very nearly resembles that of alcohol and opium combined, except that these are transient in their effects; both exert their influence upon the cerebral mass, and for a time produce very nearly the same effects observable in milk-sickness; but alcohol acts upon the kidneys and the skin, and is passed off through the lungs also by means of its volatility; otherwise alcohol would be a deadly poison. But the poison that produces milk-sickness locks up every avenue, seizes every citadel, and makes itself master of the situation, with one exception only: Persons with habitual constitutional discharges from the bowels, lungs, or a sore leg, will not take it. Milch cows, while giving milk freely, are not liable to it, nor nursing women, although I have seen two or three instances, but only one death. I knew a bitch to lose her litter from it, the disease being contracted from sucking her milk, while she escaped.

**PROGNOSIS.**—If the bowels can be moved before fatal lesion takes place, with prudence, recovery will always follow. The restoration of one function to its normal healthy state is a sure precursor of the restoration of all. In every instance of recovery the liver throws off large quantities of black bile, and recovery follows. On the other hand, where the functions are not restored, and the abdomen becomes tympanitic, and this is followed by large exhausting stools, with cold feet, a clammy surface, low muttering, &c., &c., it is safe to conclude that the case has passed beyond the reach of human skill.

**TREATMENT.**—The treatment universally resorted to, thirty-five years ago, and even later, was the most drastic cathartics, with blisters; Cook's pills, (introduced by Dr. John E. Cook, Professor of Theory and Practice of Medicine, Medical Department Transylvania, at Lexington, Ky.,) calomel, jalap, salts, castor oil, with such domestic purgatives as, extract white walnut, may-apple root, tobacco injections, &c., &c. The fact that if the bowels could be moved in a reasonable time, the patient would recover, was thought a sufficient warranty for the extraordinary efforts in

that direction ; and, strange to say, many recovered. The late Hon. Philip Triplett, of Owensboro, Ky., told me he took in one night seventy-five Cook's pills, composed of nearly two grains each of calomel, aloes and rhubarb, and that his recovery was attributed by his physician to this heroic treatment. In 1842, after ten years of disappointment and mortification from my want of success, and having learned through various channels that Dr. Wm. Trafton, of Evansville, Indiana, was treating the disease with great success, I wrote to him, and sent the letter by an intelligent messenger, asking his views of the disease, and its treatment. He wrote me very fully, and sent me a copy of a treatise he had written on the subject. His treatment was the effervescent drinks, *ad libitum*, with occasional portions of castor oil, or sulphate magnesia, to assist in moving the bowels, although he maintained that nothing was necessary but the effervescent drinks, for the first few days, to be followed at the proper time with portions of mild chloride of mercury, salts, castor oil, &c., &c. At the same time, I wrote to my preceptor, the late Dr. William Miller, of Madisonville, Ky.—a man of great originality and enterprise in his profession, but totally unambitious of fame or notoriety—and asked his co-operation in the treatment of a case I then had on hand. When he came I was using Dr. Trafton's prescription, with benefit, and he suggested, in addition, the use of castor oil, Venice turpentine and the compound spirits lavender—the latter as stimulant aromatic only ; and, to my joy, I cured a very bad and almost hopeless case in a few days. The two years that I remained in this locality afterwards, I treated more than fifty cases, without the loss of one, except where they were moribund at the time of being called in.

I adopted this treatment : First, a stimulant emetic of eupatorium, and pennyroyal or mint tea. As soon as the stomach was thoroughly emptied, I applied mustard over the epigastrium, and gave the effervescent drinks as often as the patient desired. I put his feet in a hot bath as often as I discovered them to be cooler than his body ; I rubbed him all over with hot turpentine and whisky as often as I discovered a deficiency of natural heat ; I made repeated applications of cold water, and often ice, to the head ; I kept up

frictions of hot turpentine and whisky to the spine every few hours. If he desired, I would give him draughts of grog (whisky and water) every hour or two; and, finally, after four or eight hours, I would give him a dessert-spoonful every three hours of the following mixture:

Venice Turpentine, - - - § ss.  
 Compound Spirits Lavender, § i.  
 Castor Oil, - - - § ii.  
 Mix.

Strange to say, I never saw a case where the stomach failed to tolerate this medicine after the third or fourth potion. If the black discharges followed from this, I gave no more medicine; a little spirits and water, with suitable food, was all that was necessary. If the black discharges did not appear, I gave the following:

R—Mild Chloride Mercury, grs. x.  
 Sacch. Albi, - - - gra. xx.  
 Mix—for powders x—one every two hours.

This invariably produced it, but sometimes not until pyalism had resulted.

## ARTICLE II.

*Lines on Indigenous Medicinal Plants.* By D. L. PHARES, M. D., Newtonia, Mississippi.

Every physician should be well versed in botany, so as to be able to distinguish properly and recognize all plants coming under his observation. But botany is sadly neglected in all the schools. Few physicians have had the opportunity of attaining to any considerable proficiency in this science, which presents for our consideration so many beauties, odors, flavors and adaptations, addressed to all our senses as well as to our reason. These beauties, adaptations and blessed properties are literally thrust upon us at every step, whether in field or forest, mountain brow or water-covered vale. We dash them aside without reflection; we cast

aside as useless the healing balm, the life-giving plant, beneficently prepared by the All-Wise Physician for the relief of human suffering and woe.

But disliking prolixity, circumlocution, and useless verbiage, which no one has a right to inflict on another, I proceed at once and with as much brevity as possible to present to my medical brethren a few valuable remedies derived from our Southern Flora—some of them now for the first time offered to the profession. By way of introducing another agent, I will say a word in regard to the

*Dioscorea Villosa*.—Although my ancient friend, the late learned and scientific Prof. Riddell, of the University of Louisiana, made known the properties of this plant some thirty-five years ago, few of the regular profession seem to be aware of its value, or even of its existence. Griffith, in his "Medical Botany," quoting Riddell, disposes of it in four brief sentences. It grows on the margins of swamps in all the States. The introduced species, *D. sativa* and *alata*, have been long cultivated on the gulf coast, for their large edible tubers. The *D. batatas* was brought from China, by way of France, to the United States in 1854-5, and is now cultivated for culinary purposes in all the States to a limited extent. Our native species, however, is the only one valuable as a medicine—the contorted, knotty root being the part used.

It is diaphoretic, expectorant and antispasmodic, with special direction to the stomach and bowels. It has other adaptations; but I commend it specially as a specific for bilious colic. However violent the attack, in whatever stage, even though chloroform, salts of morphia and other remedies produce no perceptible effect, this remedy relieves invariably, promptly. Whether used after other remedies had failed, or alone, even in the most desperate cases, I have seen a single pill of the extract, in less than five minutes, produce profound but natural sleep, from which the patient awoke well! This I have seen many times. The prompt, complete, permanent relief it affords is truly astonishing. For colic, it is more potent than quinine for intermittent, morphia for pain, or chloroform for spasm. A fluid extract, which I have never used, is prepared by some of the pharmacutists. They

also make a dry pulverulent extract under the name of dioscorcine, most of which is worthless. I received some years ago a very superior article of dioscorcine from New York—the dose being from three to five grains. A strong decoction of the root may be given in doses of four to eight ounces. This medicine is much used by a certain sect, whose indefatigable industry and energy in exploring and developing the varied and rich resources of our indigenous medical flora is worthy of commendation and emulation by the members of our noble and honorable fraternity.

Some years ago, unable to get a reliable extract, I wished to obtain the dioscorea in a recent state. I described it to several persons, requesting them to find it for me. One brought me an imperfect specimen of what he said his father (a very intelligent farmer) called “colic vine,” and had used for many years in cases of colic. Some fifteen months after this, I obtained perfect plants and found it to be, (what I had already conjectured from its family likeness,)

*Desmodium Rotundifolium*.—I have used this plant, both in recent and dry state, leaves and stems, in many cases of colic in subjects of all ages and conditions, with complete success. I have never used it, however, in any very severe cases of bilious colic. It is probable that a concentrated extract might effect as much in this distressing complaint as that of dioscorea. It is a most admirable thing in infantile colics and dysentery, being pleasant to take, affording prompt relief, and having no narcotic or other deleterious properties. It is nervine, tonic antispasmodic, slightly astringent, acting mainly on the abdominal and pelvic viscera, relieving colic, cramp, spasm, tenesmus, &c. The tea may be taken *ad libitum*. The small tubes attached to the roots may prove as valuable as the leaf. I have not tried them. This plant grows in dry, open woods throughout the Southern States, that on thin, close soil being best.

Several other species, as the *D. acuminatum*, and perhaps a species or two of the allied genus, *lespedeza*, I am persuaded, possess very valuable medicinal properties and are worthy of examination. None of them have ever been, so far as I know, heretofore recognized or described as medicinal.



*Polymnia Uvedalia*.—This plant may be found growing on rich soil in all the Southern States; some farmers protecting and encouraging its propagation. The root is the most valuable part, being sliced or bruised and simmered in lard for local application, or made into a saturated tincture for internal use. It is a valuable remedy in scrofulous tumors and ulcers, both of the soft parts and bony structures, under whatever name described, as hip-joint, knee-joint, or heel disease, rickets, king's evil, tubercular deposit, &c. It has effected many cures in these affections, when other remedies have failed.

*Chrysopsis Graminifolia*.—(*C. argentea*, Nutt.)—Some years ago a party of Indians encamped for some weeks near the residence of Major Jones of this county, and having received kind treatment at his hands, pointed out to him several plants, whose virtues they made known to him. One of them has now been used by the Major and other citizens with such good results in so many cases of scrofulous affection, that it has become considerably known over a wide section of country by the name of "scrofula grass." On examination of the plant, I found it to be that named above. It is found in sandy, pine barrens, in all the Southern States, flowering in September and October, and in some localities very abundant.

The whole plant is used in watery infusion, or tea, and has effected many cures of scrofulous tumors and ulcers, and cutaneous eruptions. Some of the worst, most hopeless, disgusting and horrible cases of constitutional syphilis and mercurio-syphilitic diseases have been cured by this valuable agent. It is an alterant of extraordinary power, acting gently, unostentatiously, pleasantly, effectually. I have used neither of the last two articles to the extent which their great curative powers would warrant, as I had acquired a habit of using other indigenous agents, with whose effects I had been satisfied, in eliminating the syphilitic taint, renovating the blood, and reconstructing the new man from the old wreck. I shall, however, in future, avail more of their valuable properties, which are very decided. These brief notes are hurriedly written, in order to place the articles mentioned before the profession in time for them to try them this season.

## ARTICLE III.

*Report of Two Cases.* By A. J. SHAFFER, M. D., of Lawrenceville, Ga.

CASE 1.—Mr. E. C., aged 47 years, height five feet ten inches, in good health, and would weigh one hundred and sixty pounds; of sanguine temperament, fair hair, and small blue eyes; had served three years in the Confederate army.

March 20th.—Was working on the farm, hauling rails and making fence. His dinner, which consisted of cornbread, bacon, and boiled peas, was sent to him, of which he ate moderately. After resting a few minutes, he resumed his work, making fence, and in the act of lifting a heavy oak rail upon a high fence, was suddenly taken with a very severe and excruciating pain in the symphysis pubis, (or, as he expressed it, in the middle of the cross bones,) with a pressing and persistent desire to evacuate the contents of the bowels, but could pass nothing. He vomited quite freely sundry times, and was conveyed home, when his physician, Dr. B. F. Freeman, was sent for. Supposing it to be cramp colic, caused by eating improper diet, the doctor addressed his treatment accordingly. He gave active cathartics, combined with opium; warm fomentations to the bowels, &c., &c. The cathartics were frequently repeated, and operated freely in the course of twenty-four hours, which caused the most excruciating pain. So severe were the pains caused by the act of defecation, that it required the assistance of three or four strong men to hold him. The matter discharged was of a healthy character and natural in appearance, only as modified by the influence of medicine, except the first operation, which was accompanied by a small portion of blood, perhaps ten drops. There was no difficulty at any time in passing water, which was of a healthy appearance. This is a short history of the case, from the time he was taken, up to the time that I saw him, April 4th, when the following pathological phenomena presented: Transient pains in the small intestines, most severe in the ilium and symphysis pubis; the abdomen very much swollen in its whole extent, from the os pubis to the ensiform cartilage. The parietes were unyielding to moderate pres-

sure, yet heavy manipulation produced no pain in any part of the abdomen. On application of the ear, gaseous sounds could be heard, passing with great velocity through the intestinal canal. No gas was discharged. Percussion over or in the track of the small intestines would elicit sounds similar to that produced by pouring water out of a six ounce vial, but partaking a little more of the metallic click. These sounds were louder and heavier over the lower part of the ilium and sacrum. The sounds in the last named locality would strongly impress one that they were caused by water agitated in the peritoneal cavity. His breathing was quite imperfect, in consequence of the swelling of the abdomen. On percussion, there was very little resonance in any part of the chest except over the apex of each lung. The heart labored hard; the pulse eighty-five and small in the radial artery; the countenance anxious; the tongue rather red and moist; the posterior part having yellow coat; very little thirst; micturation free; urine nearly natural in appearance.

My first examination was for hernia; but failing to detect any symptom of that derangement by external manifestations, I injected about three pints of salt water into the bowel, which was attended with a good deal of pain, as the water was forced into the bowel. It was discharged in about two minutes, and voided with a considerable force, accompanied by gas. The discharge of enema was followed by about a half drachm of thin mucus. The all-important point now was to determine, from anatomical relations and pathological symptoms, which of the many obscure, accidental abdominal diseases, to which the intestinal tube is at all times exposed, was present. In considering the attitude of the patient at the time of the attack, and the great muscular effort called for, not only of the upper extremities, but also of the abdominal muscles, in the act of placing a heavy green oak rail upon a high fence, and the symptoms of disease following the act, is it not reasonable to suppose that it gave rise to one of the numerous and obscure herniæ to which the intestines are liable, which had become partially strangulated, and might have become permanently so, had it not been for the free exhibition of active purgative medicine, causing active peristaltic motion of the bowels?

Mr. Erichsen, in his valuable work on Surgery, says, that "active or acute intestinal obstruction may arise in various ways. When of a mechanical origin, it most commonly occurs in consequence of the formation of an internal hernia, which becomes suddenly strangulated—a portion of gut slipping through an aperture in the mesentery, or omentum, or becoming constricted by bands, adhesions, or diverticula, stretching across from one side of the abdomen to the other. In other cases again it may occur from invagination, the upper portion of the intestine slipping into the lower, or by a portion of gut becoming twisted upon itself and thus forming a volvulus, owing to the mesentery, or mesocolon, being unusually long, and allowing a half twist to take place, in consequence of which complete obstruction occurs." Of the symptoms, he says: "Acute intestinal obstructions, when arising from a mechanical cause, such as the formation of an internal hernia, or volvulus, are always characterized by very marked vital depression. Constipation is present from the very first, but this symptom is not the most prominent one, and those that result are evidently, as in an ordinary case of strangulated hernia, the consequence of the injury inflicted upon the intestine, rather than of the mere mechanical obstacle to the onward passage of the feces. At the moment of the occurrence of the attack, the patient is usually seized with a sudden feeling of something wrong having taken place in the abdomen; or he is struck with intense *pain at one point*. There may be sudden syncope, though most usually the depression of vital power does not amount to this. Vomiting speedily occurs—at first, of the contents of the stomach, but after a time of a stercoraceous character. The abdomen becomes swollen and tender; the intestines being blown up with flatus, so as to give rise to immense tympanitic distension rolling over one another and occasioning a loud rumbling and gurgling noise."

The general symptoms above enumerated, characterizing intra-abdominal hernia, are most strongly set forth in the patient before us, which, I have no doubt, was omental hernia, as I think the sequel of the case will prove. But the point in the case, which I wish more particularly to call attention to, is the very severe and persistent pain in the symphysis pubis, which was the

first monitor to warn the patient that there was something wrong in the abdomen, and it was several days before pain was felt elsewhere; after which time he would at times have transitory pain in the lower part of the abdomen. Another prominent diagnostic symptom was the excruciating pain produced in the os pubis, when the cathartics first operated. There was evidently no disease in that bone, to be felt or seen. I can account for it only upon one physiological principle, that of reflex action. Drs. B. F. Freeman and T. K. Mitchell, after having thoroughly examined the case, gave it as their opinion, that the disease was inflammation of the bowels, predicated their diagnosis upon the above enumerated symptoms; in which decision I acquiesced under protest. The treatment was proposed according to that opinion. A large blister to the hypogastrium, balsamic emulsion, blue pills, light diet, &c., &c., were prescribed, and the case left in the care of Dr. F.

April 15th.—I was resummoned in consultation with Dr. F. I found the patient in a more prostrated condition—the symptoms all more aggravated. The swelling of the abdomen had greatly increased. The gaseous sounds could be heard spouting up and down the bowels without difficulty. By raising the chest, a gurgling noise could be heard descending, until it would all settle in the lower part of the bowels; then by heavy percussion over the ilium, a loud gurgling click, similar to that made by air and water, could be heard at a distance of ten yards. He was suffering a good deal from partial aphonia, in consequence of the enlargement of the abdomen and the reduced caliber of the chest's cavity—the bowels rather constipated—opiates had been freely given to relieve pain, which persisted in the old locality—micturates freely, and the water healthy in appearance. I was sent for to tap the patient for dropsy, and after a careful examination, I was confident that there was water in the peritoneal cavity, as the symptoms indicating that condition were present, even that of the wave. By the use of a crownpointed lancet, an opening was made into the peritoneal cavity, through the linea alba. I was no little surprised, after piercing the peritoneum, that no water escaped by the side of the lancet; and I supposed that it would flow when the catheter (female) was inserted; but after having used it to its

full length and gently probing every part of the cavity, there was not more than ten or a dozen drops of fluid escaped, and on withdrawing it, was found filled with fluid, thick and of a strong alkaline taste and reaction. It is not necessary to state that this dry tapping was a little mortifying to our feelings, as a large number of persons felt disappointed in failing to witness a stream of water flowing from the abdomen. I know that some of the profession would say, that this tapping was quite unnecessary—that the existence or non-existence of water in the peritoneal cavity is so easily diagnosed that there is no excuse for mistake. In uncomplicated cases, that is true; but I will leave the symptoms in this case to plead my apology.

But was there not most valuable negative information gained by this little operation? I think it quite as important in all cases, simple as well as complicated, to consider well all the negative symptoms of a disease, as in most of cases it is only by debating the negative symptoms that we can intelligently arrive at a correct affirmative evidence of diseases. Hence the negative information, furnished in this case by a simple operation, proved to be most valuable. All surgeons are acquainted with the fact, that in strangulated hernia, large quantities of water will accumulate in a remarkably short space of time. I cannot say positively that this case was hernia; but it was evidently a mechanical difficulty of the bowels, and I am forced to this conclusion from the first symptoms of the disease and the sequel in convalescence. The following treatment was now adopted:

Hydr. chlo. mit. ℥iiss.

Jalap, - - - ℥iiss.

Mix and divide into twelve powders,—one to be taken every two hours. An active dose of sulph. magnesia to be taken four hours after taking the last powder.

Tinct. of digitalis, in the dose of ten drops, was given every six hours, to be increased one drop each day. Opium to be given occasionally, to relieve pain and to prevent the powders from operating too actively. Blister to the epigastrium; light nutritious diet, etc.

April 19th.—Has taken the medicine according to direction, except one of the powders. After taking the ninth portion, he became severely nauseated and threw up large quantities of dark bile, and was actively purged at the same time. The discharges per rectum were copious, of dark, bilious matter. The blister drew well and discharged a great deal of water. The swelling of the abdomen is very much reduced, the parietes presenting a wrinkled appearance, and soft to the touch; breathes free and easy, as the lungs are freed from the encroachment of the diaphragm upon the thoracic cavity; pulse sixty per minute and of good size; tongue moist and natural in appearance; has very little pain; has passed more water than usual; no symptoms of pytalism; he thinks that he will get well. Prescribed the following:

Hydr. chlo. mit. gr.xxiv.

Jalap, - - - gr.xxiv.

Mix and divide into six powders—one to be taken night and morning, followed by an active dose of sulph. magnesia. Tinct. of digitalis, three times per day in the dose of ten drops.

April 27th.—Patient sat up most of the day.

June 25th.—Convalescence complete.

CASE 2.—Mrs. E. D., of this county, aged forty-five, of light form and in good health, would weigh one hundred and twenty-five pounds; unmarried, and had one child at twenty-five; ceased menstruating at forty-two.

In January, 1863, became anasarcoous.

April 10th.—I tapped her and drew from the abdomen two and a half gallons of water. By the use of a No. 4 needle, I drew from the legs one gallon and a half. Since April 10th, 1863, up to this time, August 1st, 1866, she has been tapped seventy-two times, and had drawn from the abdomen two hundred and twenty gallons of water.

I have been using the needle for nine years in all dropsical cases of the legs. In one case, by the use of a No. 3 needle, I drew two and a half gallons of water from the legs of a small woman in three-fourths of an hour. I find it superior to all other

modes. In the first place, it inflicts very little pain; secondly, it effectually relieves the cellular membrane of its aqueous ingorgement; thirdly, the wounds always heal kindly, producing very little or no inflammation, unlike that most cruel and *barbarous* old habit of whipping the legs with holly brushes, which produces a most distressing inflammation and troublesome sloughs and gangrene, like that of the lancet.

I prefer a No. 4 blunt new needle, that has never been used for any other purpose. I have it fixed in a piece of wood and hold it between the thumb and index finger, gauging the depth by the fingers, and then, by an active movement of the hand, puncture the skin, keeping out of the way of the larger veins and nerves and off of the shin bone, puncturing on either side and posteriorly to it, from the fact that I have observed, that any kind of a wound in the course of the anterior part of the tibia has a greater disposition to inflame than any other part of the leg.



## SELECTIONS.

*Cerebro-Spinal Meningitis.* By JURIAH HARRISS, M. D., Prof. Physiology in the Savannah Medical College.

The prevalence of this disease within the past few years, in Europe and America, especially in the latter country, has attracted the attention of the profession on both continents. Numerous contributions to medical literature on this affection, and able articles in elucidation of its causes, pathology and treatment have been published by men of ability and reputation. Among the writers there is considerable diversity of opinion. Science must advance by the clash of intellects, and differences in opinions and interpretations of observations must ultimately result in truth.

The conclusion to which many recent writers have arrived is, that there is an identity of causes, as well as nature, of Cerebro-Spinal Meningitis, and Typhus or Spotted Fever. From my observations and reading, I am forced to the belief that they are distinct diseases.

It is now well demonstrated that but few causes can induce tonic spasms of the voluntary muscles. In Cerebro-Spinal Meningitis this form of muscular contraction is *almost constant*—rare in Typhus Fever. It is well known that strychnine, or irritation, or inflammation of the spinal centre, or, lastly, of the spinal nerves at their periphery, or along their course, will produce such a result. The question, then, resolves itself into this: Can a poison, such as induces Typhus Fever, one of the lowest grades of fever known, produce this irritation or inflammation of Spinal Meninges or spinal cord, which will bring about this tonic contraction of the voluntary muscles? This result, if it occurs, must be incidental, not the rule; an exception, not a constant symptom. Whilst I have been fortunate in not meeting with a very large number of cases of Cerebro-Spinal Meningitis, I have had an opportunity to note numerous cases of Typhus. From these observations, and consultation with authors, I must confess my inability to recognize anything more than a mere coincidence, when in the progress of Typhus we meet with Cerebro-Spinal Meningeal inflammation. The converse I conceive to be true, viz., that in Cerebro-Spinal Meningeal inflammation there generally exists an in-

inflammation with an effusion of plastic lymph, whether the patient succumbs or survives. If the patient recovers, the course of the disease is not that which the Typhus presents, though protracted, nor does the peculiar rash present itself, save perhaps as an exception. Condie, in his note on Cerebro-Spinal Meningitis in Watson's work, refers to no relationship between the two diseases. Wood, in his article, "Typhus Fever," remarks: "While a student of medicine, and some years after beginning to practice, I had many opportunities of seeing the proper Typhus Fever, which prevailed epidemically in different parts of the United States, beginning in New England so early as 1807, reaching our own neighborhood in the Winter of 1812-13, and continuing to lurk in the lanes and alleys, among the crowded poor of Philadelphia, until the year 1820 or 1821, when it disappeared," etc. In 1836 he witnessed another epidemic. He makes no mention of the identity of the two diseases. Mark that it prevailed in *Winter and in a cold climate in lanes and alleys.*

Under the head of "Anatomical Characters" he says: "Though various evidences of deranged structure are presented, upon dissection after death, in the advanced stages of Typhus, *yet there is no one characteristic and essential lesion*, unless, perhaps, the state of blood and the petechial eruption. All the others may be considered *incidental.*" No reference is made to opisthotonos. So far as I am informed M. Andral, whom no medical observer in his day excelled as a medical philosopher, recorded, with his usual accuracy, the first case, in 1821, of a female who died of Cerebro-Spinal Meningitis. The post mortem exhibited the false membrane at base of cerebellum, and over the medulla oblongata, between the arachnoid and pia mater. Ollivier and Abercrombie subsequently described the same. M. Mallet believed that there was an intermission in the fever, and Gassaud regarded Cerebro-Spinal Meningitis to be of malarial origin. I quote from the same authority the testimony of Dr. Mayne, in connection with an epidemic which occurred in Ireland in 1846: "*The serous membrane covering the brain and spinal marrow was invariably found to be the seat of extensive inflammation; and unlike the more ordinary forms of arachnitis, the spinal arachnoid always suffered much more severely than the cerebral.*"

In the *London Lancet*, Sept., 1818, there is a concise and accurate description of an epidemic, by Dr. Sanderson, which prevailed in Dantzic, to which point he was sent by his government, to investigate the "nature, causes, prevention and treatment of the disease, as well as the rise, progress and extent of the epidemic." From his investigations he arrived at the same

conclusion that Gassaud had reached, that the disease prevailed as an epidemic in malarial districts—" *Contraction of the muscles of the back of the neck is the symptom which had been regarded as the most characteristic of the disease.*" In this report he however contends that the rigidity of the muscles of the neck was not tetanic. "The head was thrown backwards, and the patient complained of agonizing pain in the nape and occiput." The body could be readily bent forward by assistance, but the chin could not be brought against the chest. He mentions but one case accompanied by a petechial eruption, and *that made its appearance on the face.*

Another important fact, the result of his observations at Dantzic, is that he was led to the conclusion that, unlike Typhus Fever, the *Cerebro-Spinal Meningitis was not contagious.*

In objecting to the views of those who advocate the identity of Typhus or Spotted Fever and Cerebro-Spinal Meningitis, I urge first, that Typhus, with its slow insidious progress, low grade of fever and characteristic eruption, has been closely studied for thirty-five years; the causes carefully observed, and the pathological changes scrupulously noted, by most skillful observers. No claim, as to identity, was advanced until a comparatively recent date. Secondly, if there was an identity, the local manifestation of eruption in the one, and effusion of plastic lymph and opisthotonos in the other, should have been more frequently noticed, to say nothing of rapid death attending Cerebro-Spinal Meningitis. These two arguments pertain to negative or exclusive reasoning. I will next proceed to the more positive: 1st, as to contagion—It cannot, with any semblance of truth, be denied that all authorities admit the contagiousness of Typhus Fever. I know of no authorities who believe that Cerebro-Spinal Meningitis is contagious. Its contagiousness cannot be sustained by facts. It is an accepted proposition, unless I have been badly instructed by authors, and have made false observations, that Typhus or Spotted Fever prevails in jails, on shipboard, or in crowded, damp, and narrow streets; among a population who breathe impure air, with a limited supply of food, and that of inferior quality. Does epidemic Cerebro-Spinal Meningitis peculiarly infest these localities, or exist alone in such impure atmospheres? Such has not been the record. Upon the contrary, Cerebro-Spinal Meningitis mostly prevails in miasmatic regions, (see Drake), attacking suddenly persons in full health, those who enjoy a country atmosphere, free exercise, abundant nutritive food, and where there is no crowding of individuals in confined limits. Dr. Watson says that "these pathologists are in error who maintain that the essence of contin

ued fever (in which he includes Typhus) is inflammation of the brain; we fail to discover, in many instances, any traces of inflammation, upon inspecting the dead brain." In his opinion, then, the disturbance of the brain, during life in Typhus, as in Typhoid is functional, not organic or inflammatory.

Dr. De Costa in the *American Journal Medical Sciences*, January, 1866, gives an accurate account of the Typhus Fever, which prevailed as an epidemic, in Philadelphia, in the Winter and Spring of 1864. Under the division of anatomical lesions, he says: "In no instance was any inflammation of the brain discovered, nor did the brain substance itself look other than healthy. There was no effusion into the ventricles, nor was even congestion of the membranes a constant feature; in only one instance were the veins on the surface filled with dark blood." No reference was made by him, though he availed himself of abundant opportunities to make post mortem examinations, to the peculiar symptoms of opisthotonos, or rigidity of muscles of the posterior cervical region, nor to the existence of an effusion of plastic lymph on the base of cerebellum and over medulla oblongata.

Dr. S. F. Prewett, *St. Louis Medical and Surgical Journal*, 1865, states that in an epidemic which prevailed in Missouri, in 1861-62, he had occasion to observe a large number of cases. He records but one case which presented anything like petechial eruption.

In the *London Lancet*, as late as June, 1865, a number of cases of Typhus are narrated, and no reference made to a cerebro-spinal complication. "The researches of John Reid, and all subsequent observers (I quote from Dr. Murchison, of London,) have demonstrated that there exists no relation whatever between the degree of vascularity and the amount of subarachnoid fluid on the one hand, and the severity of the cerebral symptoms on the other. It is now universally admitted among pathologists that the lesions of Typhus are quite independent of inflammatory action." This is the conclusion to which I have arrived from observation of cases. The investigations of John Reid, Peacock, Jenner, Jacknot, Barrillin, and almost all modern observers who have had much experience in the two diseases, and enjoyed the opportunities of making post mortem examinations, lead force to my conviction. M. Molring, of the Prussian army, examined the cerebral membranes and subarachnoid serosity in upwards of two hundred cases of Typhus. In instance could he detect a pus or exudation corpuscle. The Prussian Surgeon adds: "Still it is not surprising that many modern practitioners, having little experience in post mortem examinations, regard the cerebral lesions of Typhus as due to in-

flammation, and that when the disease shows itself in countries where it is little known this should be the common opinion, with petechial eruption, accompanied with inflammation and effusion of plastic lymph on surface of the brain." In his extensive experience, he records but two cases of petechial eruption, associated with inflammation and effusion of plastic lymph on surface of the brain. In these two he does not mention that the lymph was found on what I consider the "point d'élection," in most cases of Cerebro-Spinal Meningitis. The locality of the disease, as it most frequently presents itself, is most commonly at base of cerebellum, and over the medulla oblongata.—*Sav. Jour. Med.*

*Fatal Uterine Hemorrhage; the result of professional inactivity.*

By J. M. OWENS, M. D., Hamburg, Ark.

I give a brief report of uterine hemorrhage terminating fatally for want of timely assistance, or from painful inactivity on the part of these in attendance.

Mrs. ———, aged about twenty-six years, of sanguine temperament and of unexceptionable constitution, was confined twice previous to the confinement which took place in December last, and which proved fatal.

On the 28th of February, 1861, she was delivered of her first child, at which time she was brought almost to death's door, by an alarming hemorrhage. The labor was tedious and difficult, on account of a face presentation; and in addition there proved to be adherent placenta, that appendage being attached high up in the fundus, the funis being coiled around the neck of the child.

The child was born asphyxiated, but was resuscitated after an hour's rigid application of Hall's method, the major part of which had to be entrusted to the care of the nurse (who happened to be quite an intelligent lady), my own attention being demanded by the mother. I immediately proceeded to remove the placenta by introducing the hand and gently breaking up the adhesions, the uterus being in a state of inertia and bleeding profusely. By per-

severing in the use of cold application and decoction of ergot, together with mustard to the spine, and pressure applied with compress and bandage over the region of the womb, in six hours the hemorrhage was entirely arrested, and I had the satisfaction of seeing the mother make a good recovery. The child also did well. On the 4th of December, 1868, Mrs. ——— was again confined. I was called, and arrived at her bed-side before the contractions become very severe. She was greatly alarmed, however, saying she could not possibly survive her confinement if she must suffer as in her first labor. Her fears were relieved when, after an examination, I informed her this was a natural presentation and that she would have a comparatively easy time.

My opinion was verified by the result; the labor lasting only four hours. But, on immediately introducing the hand, (which I was warned to do by the adherent placenta and alarming hemorrhage in her previous confinement) I found just such a state of things existing as before, with an hour-glass contraction already beginning; the placenta was easily detached and delivered, giving the womb an opportunity to contract, thereby preventing the possibility of hemorrhage.

On the 10th of December, Mrs. ——— was confined the third time. Her husband called on me in October, to request me to hold myself in readiness to attend her. At this time he lived fourteen miles distant. I urged on him the propriety of sending Mrs. ——— to town; but it was not convenient for her to leave home. I warned him to be careful, and, in case of sickness preventing my compliance with her request, to be certain to have a physician of some obstetrical experience and good judgment, with a mind prompt to act; and I requested him to tell the physician in attendance, for me, to remove the placenta as soon as the child was taken charge of by the nurse, and to be certain not to wait to remove the placenta by traction on the cord, if it offered the least resistance, but to introduce the hand far up, as on its speedy removal depended her existence.

On the 9th of December a boy came in great haste for me to see Mrs. ———. I was confined to my bed by sickness. I tried to get my confreres to attend the case, but they were either engaged or unable. I dressed and started, but found, on driving three miles, that I could not proceed. There were physicians in the neighborhood, and I supposed she would be well cared for. Early on the morning of the 10th, a second messenger came to say Mrs. ——— was very ill. I started again, and when in three miles of the residence I met a servant coming with the measure of Mrs. ———'s coffin.

I saw her husband, and he told me with tearful eyes, that the labor was not a difficult or protracted one, but, that the placenta was not removed. A physician living near was called in, and arrived soon after the child was born, Mrs. ——— requested the Doctor to remove the placenta, stating that I had removed it with but little trouble on two occasions immediately after delivery, and that unless it was speedily removed she would bleed to death. The physician failed to do as requested (from what cause I am not prepared to say) and as might have been expected under the circumstances, in a few hours Mrs. ——— was dead. It may be well to state, in this connection, that the first wife of Mr. ——— (the subject of this report being the second) had several violent hemorrhages from adherent placenta, and died of inflammation produced from that cause, the placenta not being yet delivered when she died nine days after miscarriage at four months of gestation.

I have been in the habit for several years (and I think I am justified in the practice) of removing the placenta immediately after delivery, and if I fail by gentle traction on the cord, and by unbuttoning as you would unbutton your coat, I immediately proceed to introduce the hand, while the parts are yet dilated, and deliver the placenta at once. Most authors tell us to wait an hour after the child is born, or until the uterus begins to contract. In the great majority of cases, doubtless, the placenta will be detached and expelled by the efforts of the uterus, nothing more being required than gentle traction; but if there should be adhesion to the uterine walls, and you wait an hour, or until the uterus begins to contract, the vagina in the meantime contracting, gradually assuming its natural dimensions and becoming tender, you are losing valuable time, and independent of hour-glass contraction, which frequently happens in adherent placenta, you will find very great difficulty in introducing the hand without the use of chloroform, which is certainly not devoid of danger in a subject already prostrated; whereas, immediately after delivery, when the organs are thoroughly dilated and the mother in high spirits and full of hope, rejoicing at the favorable issue of her confinement, it is easy, in a large proportion of cases, to introduce the hand and detach the adherent placenta with little pain or inconvenience to the mother, and no trouble to the physician, in doing which you have accomplished two very desirable objects, viz., saved the patient much unnecessary suffering, and prevented serious hemorrhage, or a painful, protracted, and possibly fatal, metritis.—*Southern Journal of the Medical Sciences.*

*Strychnia in Anæsthesia.* By SAMUEL C. CHEW, M. D., Professor of Materia Medica and Therapeutics in the University of Maryland.

The influence of strychnia, as a spinal stimulant, is chiefly exerted, as is well known, upon the anterior column of the cord, and through the motor nerves originating in that portion of the spinal axis, it gives rise to muscular contractions.

It was first employed as a remedy for paralysis, more than fifty years ago, by Fouquier, who pointed out with great accuracy the peculiar indications for the use of strychnia, and whose observations have been abundantly corroborated by later experimentation.

According to Brown-Sequard, the action of strychnia consists in an increased nutrition of the spinal marrow, in consequence of which a larger amount of nervous force is generated and conducted along the nerves to the muscles; and this conclusion agrees with that arrived at by Koelliker, who has proved that the drug acts upon the spinal marrow alone, and not directly upon the nerves themselves, nor upon the muscles to which the nerves are distributed. This is rendered evident by the simultaneous contraction and relaxation of many muscles, which can be occasioned only by an influence acting upon their common source of innervation; and that this source is the cord, independently of its connection with the brain, is proved by the fact, that in the midst of the tetanic convulsions, the central functions are often found to be entirely unaffected; and by the further fact, that in some of the lower animals, if the cord be severed from the brain, the same phenomena are caused by strychnia as when the connection is unbroken.

In its influence upon the cord, strychnia, as just stated, appears to affect principally the motor tract. In many cases of paralysis of motion, in which sensation is unimpaired, power is rapidly restored to the paralyzed muscles by its use, and when a poisonous dose of strychnia has been taken by a person in health, though the spasmodic contractions of the muscles may be of the most violent character, yet very generally no hyperæsthesia or exaltation of sensibility is produced. It often happens, indeed, that little or no pain is felt, even in the midst of the convulsions, the stiffness and soreness of the muscles that are subsequently experienced being due to muscular exhaustion, as a consequence of excessive action.

Though the effects of strychnia are exerted chiefly upon the motor tract of the cord, it must not however be regarded as limited



in its action exclusively to this region. After it has been administered in small medicinal doses for some days, patients occasionally experience a sense of formication, tingling or itching in various parts of the body, resembling what is felt, when the foot is said to be asleep. This shows that it exerts a certain degree of influence over the sensibility of the nervous centres, stimulating the function of sensation to some extent, but much less than that of motion. In the treatment of paraplegic cases, in which sensation and motion are both abolished, when strychnia is indicated, its use is found to be followed by a restoration of sensibility, as well as of the power of motion. And still further, in some rare cases, it appears to act principally, if not exclusively, upon the posterior column, when the function of sensation is impaired, without the existence of any corresponding disturbance in that motion. M. Petrequin reports instances, in which he had used it successfully in the treatment of anæsthesia; and cases of amaurosis and impairment or abolition of the senses of taste, smell and hearing furnish illustrations of its beneficial effects upon sensory paralysis.

The following case is of interest, as showing a very marked action of strychnia upon a paralysis of sensation, alone affecting an extensive surface:

J. B., a native of Pennsylvania, aged 52 years, was admitted into the Baltimore Infirmary, October 8th. He had suffered from cough, more or less constantly, for more than two years, and had lost flesh and strength. Upon his admission, the signs of a small cavity in the right lung were discovered. He was put upon the use of cod liver oil, and under its influence the pulmonary trouble underwent a marked alleviation.

About a month before his entrance into the Infirmary, the patient became aware of a diminution of sensibility in the left foot; this was for a time so slight that he made no mention of it to the attending physician. Gradually, however, the anæsthesia extended upwards, from the foot to the knee, and on taking charge of the Infirmary, in March, I found that sensibility was entirely abolished in the foot and lower part of the leg, and very much impaired for the distance of three or four inches above the knee. In all other parts of the body, it was unaltered. The power of motion appeared to be affected only secondarily, as a consequence of the loss of sensation. The patient could move his toes, and had control over all the muscles of the limb, but not feeling the contact of his foot with the ground, his gait was unsteady, and, unless his eye was kept fixed upon the foot which had lost sensation, he was liable to fall down.

The method suggested by Weber, for ascertaining the degree of cutaneous insensibility, which consists in determining how closely the points of a pair of compasses may be approximated on the skin, and yet be distinguished as two points, was entirely inapplicable to the lower part of the limb, as sensibility was utterly abolished. A much rougher test was necessary, and accordingly I made, with a bistoury, two incisions through the skin, one just above the outer malleolus, the other just below the knee, without causing the patient to manifest the least sign of pain; and the same insensibility was shown on applying a lighted match to an intermediate point.

Thinking it a favorable case for testing the effect of strychnia, upon sensory paralysis, apparently uncomplicated with disturbance of motor power, I directed the patient to have the 48th part of a grain of strychnia in solution three times a day, and had the affected limb rubbed at the same intervals, with a liniment composed of equal parts of *Tr. Nucis Vomic.* and *Tr. Arnicæ.*

In about a week there was a very decided increase of sensibility in the upper part of the limb, and some evidence of a return of feeling in the foot, which in the course of two or three weeks more became very perceptible.

The dose of strychnia was now increased to the 24th part of a grain, and continued in this amount for several weeks. The degree of sensibility increased steadily and rapidly, until by the 1st of June there was no apparent difference in this respect, between the two limbs—the application of irritants affecting the one that had previously been anæsthetic, fully as much as the other.

The patient was now no longer liable to fall down when his eye was averted from his foot. He could walk without inconvenience, for a considerable distance, and was able to go up stairs without using his cane.

The return of sensibility was fairly attributable to the use of strychnia; inasmuch as the anæsthesia, which had been absolute, began to abate almost immediately after the first administration of the drug, and constantly diminished until the normal function was entirely restored; the ability to walk being altogether dependent upon the return of sensory power.

The pathology of this and similar cases is interesting, and yet very obscure. The dilemma of an eccentric or a centric lesion is presented. If the paralysis be supposed to depend upon an eccentric lesion affecting a nerve in its course, such as mechanical pressure, or a diseased condition of its fibres, how is it to be explained, that sensation is affected independent of motion? Can we suppose the pressure or the disease to act upon the sensory

filaments alone, and not upon the motor also, when the two roots of the spinal nerves, after emerging from the cal, become so blended together, that their respective filaments can no longer be distinguishable?

On the other hand, if the lesion be centric—seated, that is, in the posterior column of the cord, or in the posterior root, before it has become united with the anterior—why is it that the seat of sensation in the cord was affected by impressions transmitted along the sensory nerves from the upper part of the limb, which never lost sensibility, and not at all affected by impressions which came from its lower parts?

In the present state of our knowledge of the nervous system, no satisfactory explanation of these phenomena can be offered, and we are obliged to accept them as ultimate facts.—*Richmond Med. Journal.*



*Whether Cholera is Contagious.* By JACOB BIGELOW, M. D.

Within the present century, cholera, a disease indigenous in hot climates of the East, has, at various intervals, made its appearance in the temperate latitudes of Europe and America. It is now again exciting interest from its possible and perhaps probable approach to this country.

The experience of the last thirty or forty years has led a majority of medical men who have observed the disease, to believe that, as a general law, it is not contagious. In this belief I must individually remain, until evidence more satisfactory than any which has yet appeared, shall justify an opposite conviction.

The great epidemics of 1880 and 1847 had a remarkable coincidence in the path which they pursued, and in the order and dates of their arrival in different cities. They seem to have followed certain great routes of travel, and to have avoided others equally frequented. According to Lesegne, they both visited consecutively, and in corresponding months, Tiflis, Astrachan, Moscow, Petersburg and Berlin. In 1881, cholera did not take the most frequented route from Berlin to Paris, but passed along the shores of the Baltic, crossed over to Sunderland, went down to London, and again crossed the channel and arrived in Paris

about six months after its appearance at Berlin. A disease propagated by contagion of any kind, would hardly have avoided the most frequented thoroughfares from Berlin to Paris, while it occupied half a year in going round by England.

The epidemic now, or lately, prevailing in Europe, appears to date back at least nine months, at which time it existed among caravans of pilgrims visiting or returning from the city of Mecca. In the middle of May last it was at Alexandria and Cairo, in June at Constantinople, Ancona and Marseilles, and in November at Paris, Havre and other European cities.

Thus it appears that cholera has now existed in Europe from three to eight months, among cities having constant commercial intercourse with seaports of the United States, during which time thousands of passengers and tens of thousands of bales and packages have been landed in our maritime cities. If cholera were as contagious or portable as many believe it to be, it ought to have begun and perhaps finished its work in many of our seaports before this time.

Epidemics require two things for their introduction and extension. These are—first, predisposition in the inhabitants of the place visited; and, second, the arrival or presence of an exciting cause. This cause in some epidemics, such as small-pox, is contagion. In others it is an occult influence, not yet discovered nor understood, nor known to be controlled, except in some instances, by hygienic agencies. No country, I believe, has succeeded in keeping out cholera by quarantines, and no country, as far as we know, can produce it artificially or retain it after the predisposition has disappeared. In its own time it moves on thoroughfares where men are traveling, and spreads in cities where they are stationary, for no better known reason than that mankind are its necessary food, and that where there are no people, there can be no cholera. But why, of two frequented roads or cities, it selects one and avoids the other, investigators have not yet been able to satisfy us.

The credit of having introduced the present epidemic into Europe, is by a sort of popular acclamation assigned to the hosts of squalid devotees who perform an annual pilgrimage to Mecca. Yet we are told that "the cholera exists every year among the caravans of Musselmans arriving at the holy cities," so that their supposed mission of forwarding the cholera to Europe, in most years fails to be performed.

Cholera, like influenza and some other migratory diseases, has, usually, but not always, advanced from east to west. Of the vehicle in which it travels, or the course it is next to take, we know

about as much as mankind knew of the cause of lightning before the discovery of electricity. Its conveyance and propagation have been ascribed to air, to water, to material foci, to electricity, to ozone or to the want of it. Of late, in consequence of the vast development by the microscope of the existence everywhere of minute living organisms, it has become more common to ascribe the arrival of this and other like epidemics to unseen "germs" which are called seeds or ova, cryptogamic or animalcular, according as the fancy of the theorist inclines him to adopt a vegetable or an animal nomenclature.

But in this, as in many other cases, it is easier to trace an analogy, or to assume a cause, than it is to prevent an effect. Although inquirers have been indefatigable in their attempts to enlighten the world on the means of ridding ourselves of the presence of the various cotenants of our globe, yet no crusade has yet succeeded in banishing from our fields and houses the unwelcome swarms of mosquitoes, worms, grubs and flies, which molest us with their animal presence; nor in suppressing the blight of grain, the potato rot, or the peach-tree disease. Happily some, if not most of these, have their periods of abatement or disappearance, and this rather through the order of Providence, than the agency of man. Cholera seems to abide in the same category. We know little of its exciting cause, and not much of its prevention, except that by following in our personal habits the dictates of reason and experience, we diminish both the frequency and danger of its occurrence.

Whatever may be the cause or vehicle of cholera, credulous and excitable persons are impatient of suspense, and are prone to cut a knot which they fail to untie. When an epidemic disease first appears, some coincidence is always brought to light which is supposed capable of accounting for it. The arrival of a ship, the opening of a trunk, or the washing of a garment, are among the most frequently accepted causes. But as these events have happened a thousand times before, and apparently under like circumstances, without any known results, it has been thought necessary by some of our later writers, to narrow the compass of actual exposure down to the reception of the morbid excretions of one individual into the digestive canal of another. The first impression made by this announcement must, if true, be one of relief, the danger not seeming likely to happen very often. But to the possibility of such danger, we can never oppose an absolute negative, so long as we persist in eating smelts and flounders caught about the mouths of our drains, or even turnips, salads and strawberries raised at Brighton. The risk, however, is so small, that

persons will prefer to take it, rather than to deprive themselves of food or luxuries.

Of the many sensation tales printed and re-printed about cholera, and the supposed instances of remarkable communication or arrestation, it is sufficient to say that they are frequently interesting, being fully as dramatic as they are probable.

In the same regard we cannot help noticing that credulity, and perhaps private cupidity, have caused much stress to be laid on the supposed preventive efficacy of what are called "disinfectants," a mysterious word which implies a thing assumed but not proved to exist. We have deodorizers, such as chlorine, charcoal, etc., which by their combination render certain effluvia imperceptible to our senses. But that these are not *disinfectants*, there is most abundant evidence. The narrative, then, of the physician at Malta, who covered certain surfaces in vessels with oil, and had them "disinfected by chlorine gas," after which "no new cases occurred," is to be classed with other like results, with which the medical press always abounds at the close of epidemics.

In clean and well-regulated cities of temperate climates, cholera is far from being the most formidable of epidemics. A greater part of its victims are the miserably poor, the worn out, the ill provided, and the intemperate, in whom this disease only anticipates the date, but does not greatly increase the annual or biennial number of deaths. Its mortality in our northern Atlantic cities rarely amounts to one per cent. of the population in a given place or year, so that a man may reside through an epidemic in one of these cities with less risk than he can take a pleasure voyage to Europe. After having witnessed many cases of cholera in this and other cities, I am farther satisfied that it affords one of the easiest modes of exit from the world.

People who would avoid or prevent cholera, should cultivate equanimity, regularity of life and habits, cleanliness, salubrious exercise, temperance and avoidance of all excesses. When they have done their duty in providing for the care of the sick, allaying public panics, and abating public nuisances, they may safely dismiss their apprehensions. Little good and some harm is always done by the indiscreet agitation of a subject which is to a great extent beyond our control. A single or sporadic case of cholera occurring in a village of a thousand inhabitants may attract little notice, and perhaps pass without record; but a hundred cases in a city of a hundred thousand inhabitants, make an aggregate which generally causes some panic, though the proportion is exactly the same, and the panic equally unnecessary. It is possible that the supposed immunity of country districts in compari-

son with cities, may be accounted for by the fact, that in the sparse population of country towns cases are less liable to be detected and published.

I may be excused for repeating the following remark from among some "Aphorisms" published by me about thirty years ago, when the disease was new and little known among us. "Should the cholera continue to prevail for three years throughout this continent, it would cease to interrupt either business or pleasure. Mankind cannot always stand aghast, and the wheels of society at length would be no more impeded by its presence than they now are by the existence of consumption, of old age, or of drunkenness."—*Buffalo Medical and Surgical Journal*.

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#### *Treatment of Disease by Oxygen.*

In the *Lancet*, March 10, 1866, Dr. R. H. Goolden furnishes the results of some experiments he has been carrying on at St. Thomas Hospital, London, on the application of oxygen as a remedial agent in the treatment of disease.

The idea of inhaling oxygen was mooted by Priestly soon after its discovery in 1774, and by Sir Humphrey Davy and by Dr. Beddoes in 1804, but not adopted to any extent. Until Dr. Goolden could obtain a proper instrument he used the oxygen water and the binoxide of hydrogen. The latter he exhibited in one drachm doses, diluted in two ounces of water. He found it to have a marked influence on the biliary secretion, increasing the quantity and improving the quality, and often producing large biliary dejections. At the same time he causes his patient to inhale a mixture of oxygen and air, in the proportion of 1 to 4, from a large vulcanite bag, with a tube, stop-cock and mouth-piece. Its use is continued for half an hour daily, slowly inspiring at intervals, and filling the lungs as much as possible.

In chronic gout Dr. Goolden has seen this treatment followed by clear urine, great relief, and in some cases cures have resulted. He has latterly found, in carefully selected cases, the Turkish bath a great expeditor of the absorption of enlarged joints, and a valuable adjunct to the oxygen treatment, and that in cases where

Turkish bath alone had failed. Lithic acid does not appear in the cutaneous excretion of the Turkish bath, even where it is known to abound in the blood.

Dr. Demarquay, in a recent work, "*Essai de Pneumatologie Medicale*," treats of the practical value and effects of the inhalation of oxygen. At first the inhalation of oxygen produces a sensation of heat in the mouth, which soon ceases; the skin becomes warm, and sometimes slightly moist; the pulse is quickened, and becomes harder; the appetite returns, with a desire for muscular exercise.

In incipient phthisis, before fever comes on, and the patient is rapidly emaciating, with persistent indigestion, oxygen has a salutary influence. In anæmia, particularly in the chlorosis of young girls, with its attending obstinate anorexia, in the anæmia of persons convalescing from acute diseases and following hemorrhages, and especially in that variety met with in the puerperal state, oxygen is a valuable remedy. Where persons are debilitated, by long and profuse suppuration, it is useful. In all these affections inhalations of oxygen seem to sustain the forces of the patient, and help towards recovery.

In surgery, oxygen baths may be used to improve the state of slowly healing and ill conditioned wounds and ulcers, and to hasten cicatrization. The observations of Lagier, Maurice Raynaud and Demarquay, leave no doubt of its value in senile gangrene of the foot, so long as the circulation is maintained in the plantar artery.

Dr. F. Bricheteau (Bulletin Gen. de Therapeutique Med. et Chir., Feb. 28, 1866,) has published a paper on the "Therapeutic Employment of Oxygen Gas," in which very minute instructions are given for its administration, with a description of the apparatus of Limousin, of Paris, for the inhalation of oxygen. The gas should be prepared invariably by the decomposition of the chlorate of potash. (*Preparation du Gaz Oxygene pour Inhalations*, par M. Limousin, Pharmacien, *Bullet. de Therap.*, t. lxxviii., p. 167.) It is then introduced into a caoutchouc or silk bag, with a flexible tube, which, furnished with two stop-cocks, terminates in a straight glass tube introduced into a water goblet, half filled with water; a second pipe passes through the cork in the mouth of the goblet and to it is attached another flexible tube, furnished with an ivory mouthpiece. The oxygen, either pure or diluted, passes through the water, and is washed from all impurities it may have. The dose varies with the age and condition of the patient, but ordinarily from thirty-five to fifty pints are given in the course of the day, half in the morning and half in the evening. Even



when pure oxygen is put into the receiver, a certain amount of atmospheric air is necessarily respired at the same time through the nostrils. Dr. Bricheteau adds his testimony to the quick and decided improvement of the appetite under the use of inhalation of oxygen. Berenger-Feraud (*Bullet. de Therap. t. lxvii.*) has shown satisfactorily the great diminution in the amount of sugar in the urine of diabetic patients during its use.

The testimony so far given in favor of the therapeutic employment of oxygen gas by inhalations and local baths, warrants its admission as an article of the materia medica, and its rational employment in practical medicine.—*The New York Medical Journal.*

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*The Blister Treatment of Rheumatic Fever. Cases under the care of Dr. JEFFERSON, at St. Bartholomew's Hospital.\**

The safety of the heart is undoubtedly the main point at which every treatment must be directed; and in this particular more especially does the Blister Treatment exhibit its peculiar value. In a communication read Wednesday, March 22, by Dr. Davis at the Hunterian Society, he stated that of fifty cases which had been admitted under his care at the London Hospital, twenty-seven had hearts already damaged by recent or old inflammatory mischief, and twenty-three were free from cardiac complication. The results of the blister treatment in these fifty cases showed that as many as twenty-five, when discharged from the Hospital, were totally free from any endo- or peri-cardiac disease; or, in other words, that while every heart was saved which came in sound, two recent cases of endo-carditis were apparently cured by the alteration effected, as he believed, in the alkalinity of the blood by the free discharge of serum from the neighborhood of the inflamed joints. Dr. Davis also states that those cases answer best to the treatment in which a great number of joints are simultaneously affected, and when, by setting up, a large amount of discharging surface in the proximity of the inflamed parts, a large

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\* See last volume of the *Retrospect*, Synopsis, p. 278, for a brief epitome of this plan of treatment.

proportion of the *materias morbi* may be evacuated at one *coup*. Cases where the poison would appear to crop up to the surface by instalments, attacking the various joints at intervals of days, do not afford such striking examples of the efficacy of the treatment. The first case, where an unexampled amount of blister was applied in an extremely acute case, and where the patient was discharged, cured in thirteen days, will well illustrate Dr. Davis's position. That 'this treatment is not simply local in its action is also shown in the alteration produced in the urine in the majority of the cases cited; for in eleven the urine remained acid, but generally diminished in acidity during the whole period of the case; in twenty-two it became neutral shortly after the serum was discharged; in ten it exhibited alkaline re-action; while in seven no notes were taken.

CASE 1.—William S., aged thirty-two, a working silversmith, and exposed to great variations of temperature, was admitted into the Hospital on December 2nd, the seventh day of his illness, and was discharged cured on December 15th, thirteen days after he came under treatment. Eleven blisters, amounting to 482 square inches, were applied simultaneously, and with almost immediate relief. As the patient said, "the rheumatic pains left me as soon as the blisters drew;" and on the third day from admission all pain had disappeared. The pulse fell from 105 to 95 per minute; the temperature from 101.4 to 99.6 and 98.8; no cardiac mischief was developed. The urine, scanty and acid on admission, was rendered slightly albuminous from the presence in it of a small quantity of blood. The slight stranguary and albumen, however, disappeared in forty-eight hours. He had slept very badly from the commencement of his illness, but as soon as the poultices were applied to the blistered surfaces sleep returned, and was "good" every night during the time he remained in the Hospital. His appetite, bad on admission, was good on the third day; and his thirst, which was slight when he came under treatment, was not increased by the blisters, is reported to be absent on the fourth day. The heart was sound when he came under treatment, and free from disease when he left the Hospital.

CASE 2.—Wm. P., aged twenty-two, bootmaker, was attacked for the first time with rheumatic fever on November 29th. He was admitted into the Hospital on December 6th, the seventh day of his illness, and was discharged on January 2nd, 1865. Seven blisters, equal to 133½ square inches, were applied on December 9th, and the pain, which was severe previous to their application, had disappeared as soon as the surfaces had been dressed. The following day the clinical report states: "There is no pain any-

where, and with the exception of a little uneasiness on the right shoulder on December 17, he was quite easy and comfortable until the day of his discharge." The pulse fell from 110 on admission to 90 per minute on the third day. The temperature from 104.4 to 98.6. The heart presented a systolic murmur, distinct at admission over base and apex, and was unchanged at the time of patient's leaving the Hospital. His sleep, which was stated to be bad before the blister application, was improved on the second, good on the third night, and remained satisfactory until he was discharged. The urine presented a slight trace of albumen as the result of the treatment, but was normal and free from that substance forty-eight hours after the blisters had been applied. The appetite, which was indifferent on admission, is reported to have been "good" on the fourth day, while the thirst was absent at first, and continued so, unaffected by the local irritation set up by the blisters.

CASE 3.—John B., aged nineteen, was admitted on December 8, 1866, the seventh day of his disease, and discharged January 30, 1865. He had, however, been up and dressed from January 11, 1865. Eight blisters were applied on December 9, three on the 12th, one on the 13th, one on the 14th, one on the 21st, making in all 608½ square inches of empl. lyttæ. The day succeeding the application of the eight blisters the report states that all pain had disappeared. On the fourth day from that date, the patient has "now a little pain in the right shoulder, and says he wants another blister for it," which is applied and followed by great relief. The clinical account says: "December 14.—The patient has no pain anywhere. December 18.—The same. December 19.—Had pain in the left knee yesterday; I think he caught cold from going to the closet yesterday. And December 20.—The left ankle and knee were swollen." The application of the blister removed all pain and swelling, and never returned during the time he continued under treatment. The pulse fell from 108 to 86, and varied from time to time, with the appearance of the affection in different joints. The temperature fell from 100.8 to 99.4, and also varied with the pulse. The heart presented before the application a systolic murmur at the apex, which remained unaltered at the time of his leaving the ward. His sleep, which had been bad since December 2, was pretty good on the night after the blisters had been dressed; moderate on the fourth; good on the fifth; disturbed by a blister considerably on the 6th; good on the following and every succeeding night. The urine: Its reaction before the blister application was not noted, but the treatment induced some stranguary and traces of albumen, and its

condition varied from time to time with the variable condition of the joints. Appetite is stated to have been bad on admission; a little better on the second day from the application of the blisters; improving and gradually becoming good from the fifth day of the treatment. The thirst was slight when the patient entered the Hospital. It appears, however, to have been considerably increased after the application of the blisters, but the symptoms vanished in a few days.

CASE 4.—Charles P., aged twenty, butcher, already previously the subject of acute rheumatism, was admitted on December 8, 1864, the fourteenth day of his illness, and discharged on January 18, 1865. Four blisters, equal to 118½ square inches, were applied simultaneously, and with such relief that on the day succeeding the application all pain had disappeared, and his sleep, which for fourteen days had been wretched and without benefit to him, is reported as being good, and continuing satisfactory for the remainder of the time he was under observation. The pulse, which was 80 and 66 respectively on the two days before blistering, became 72, 68, 63, and ultimately 60. The temperature, 100.4 and 98.8 before blistering, became 98.8, 99.2, 98, and ultimately, on cure, 98.4. The heart was free from disease on admission, and continued the same during the entire period. The urine presented after the blistering, a very slight trace of albumen. The appetite, which had been bad since November 25, was very much improved on the day after the blisters had been applied. The report says, "he eats everything before him;" and it continued excellent from that date. The thirst was great on admission, only slight after the blisters were applied, and stated to be *nil* on the following day.

CASE 5.—Susan J., aged twenty-two, needlewoman, of fair complexion and sanguine temperament, and who had had three previous attacks, was admitted with acute rheumatism on December 12, the fourth day of her illness, and discharged on February 2, 1865. Six blisters were applied; four on December 12, and two on December 14, equal to 328 square inches. On the day succeeding the first application, the report states: "There is no pain now in the hands and ankles, but pain came on in the night in both shoulders, and she has had a very slight pain in passing urine." After the second application the report continues: "Feels much better; no pain anywhere; got out of bed this morning; wrist still swollen and red, but soft, movable, and not tender to pressure." On the following day report states: "She cannot even invent a pain anywhere; looks well, and is only weak. The pulse fell in this case from 114 to 100, 90, and 70, and was

84 at the time she left the Hospital. The temperature fell from 101.7 to 99.7, or two degrees. The heart was diseased on admission, and the systolic murmur at base and apex remained unchanged. The urine, at first acid, and containing a slight trace of albumen from the blisters, became alkaline on the second day from the time of the local application, and normal speedily after this date. Her sleep, which had been almost absent from December 8, is stated to have somewhat returned after the blisters were removed, to be much better on the fourth, and very good on the fifth night, and to have continued satisfactory until the time she was discharged. Her appetite, none on admission, was improved immediately after the application of the second set of blisters, and pronounced good on the fifth day after the last-named application. The thirst was very great on admission, unaltered the day after the blistering process, much less in amount on the following day, and none on the succeeding days.

The following case occurred under Dr. Davis's own care, at the London Hospital:

A case at present under the care of Dr. Davis affords an excellent example of the safe and rapid results of the treatment. The patient was brought into the London Hospital on Friday night completely crippled from acute rheumatism, and presenting the usual symptoms of that disease. He described his agony as intense. Ten blisters were at once applied, and a grain of morphia was administered internally.

On the Saturday evening he was free from all pain.

On the Sunday he declared himself to be comfortable, and his joints to be movable.

On the Monday morning he sat up and washed himself, and in the evening was able to walk down the ward to the closet.

On Tuesday he was perfectly easy, with appetite returned, and thirst absent; and was ordered to have a chop and a pint of Bass's ale, as he had been accustomed to live rather freely. The urine in this case was found to be strongly alkaline on re-action, and perfectly free from any trace of albumen as tested by heat and nitric acid. He had had no stranguary. On being questioned as to the pain induced by the blisters, he said that he would gladly have them repeated were he unfortunate enough to have another attack of rheumatism. No cardiac mischief was developed. No medicine beyond the morphia already mentioned had been administered.—*Medical Times and Gazette*, April 1, 1865, p. 333.

## EDITORIAL AND MISCELLANEOUS.

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### ATLANTA MEDICAL COLLEGE.

The Regular Session of this Institution for the present year has just been concluded.

The commencement exercises took place at the City Hall on Friday, 31st August. The addresses on the occasion, we must say, were of the most interesting character. We hope to be able to publish one in each of the two succeeding numbers of the Journal.

The graduating Class, numbering twenty-nine, was composed of excellent young men, and, in point of intellect and preparation for the duties of a physician, has not been excelled by any it has been our pleasure to become acquainted with. In fact, the whole Class in attendance upon lectures during the course, was made up of moral, studious and intellectual young men.

The following names compose the Graduating Class :

R. G. Smith, Ga.	H. N. Harris, Ga.
Wm. O'Daniel, Ga.	C. L. Williams, Ga.
J. H. Russell, Ga.	J. L. M. Hardman, Ga.
Wm. D. Sterrett, Texas.	Paul Gist, Tenn.
R. E. Baily, Ga.	G. B. Atkinson, Ga.
T. S. Mitchell, Ga.	M. Edwards, S. C.
J. B. Wright, S. C.	G. F. Wirsén, Sweden.
J. S. McCants, Ga.	R. B. Anderson, Ga.
D. C. Bennett, S. C.	R. S. Cameron, Ga.
C. C. Sanders, Ga.	M. W. Fowler, Ga.
C. C. Hart, Ga.	S. S. Smithwick, Ga.
W. B. Wells, Ga.	J. H. Phares, Miss.
J. A. Hunnicutt, Ga.	W. H. Johnson, Ga.
W. B. Brantly, Ga.	J. G. Arnall, Ga.
J. C. Sosnowski, S. C.	

John M. Johnson, M. D., of Georgia, and George F. Jones, M. D., of Tennessee, were admitted *ad eundem gradum* in the Institution.

The announcement for the next Course of Lectures will be issued in a few weeks, in which will be found all desirable information in regard to the operations of the Institution.

In advance of its publication, however, we will mention, for the information of those not familiar with the fees, requisites for graduation, etc., etc., that the next regular Course of Lectures will commence on the first Monday in May 1867.

The usual fees will be required—for the Course of Lectures, \$105; Matriculation, \$5; Dissecting Ticket, \$10. Board in the city, at respectable and well kept boarding-houses, can be had at about \$20 per month.

The usual requisites for graduation will be demanded.

At an outlay of several thousand dollars, the College building, apparatus and enclosure have been put in a condition that will allow facilities, equal to those before the war, for instruction in the various branches of Medical Science.

The daily exercises of the Dispensary will, as during the session for the present year, be had every morning before the regular hours for lectures. Clinical medicine, therefore, will receive daily attention, and afford a good variety of interesting cases to be examined and prescribed for in presence of the Class.

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#### MEDICAL INTERNATIONAL CONGRESS.

A Medical Congress, to meet in Paris at the World's Fair in April next, is proposed. A communication has been received, addressed to us by the Committee appointed to communicate with medical and other scientific organizations in other nations. We invite attention to the subject, and would be pleased to publish any suggestions from the Profession on the subject.

The following is the translation of the communication referred to:

PARIS, June 1st, 1866.

*Messrs. Editors:* A Medical International Congress will convene at Paris, in 1867, at the meeting of the World's Fair. The time has now arrived for making known to our confreres, both the

project itself and that which has already been done to insure its success. Under these circumstances, we think it advisable to give it publicity through your estimable Journal, and we now ask that you have the kindness to insert the note which we have the honor to address you. In November last, a Central Committee was formed at Paris, for the purpose of preparing an organization for the Congress of 1867, and replying to the petitions sent by the Congress of Bordeaux. The members of the Committee are:

M.M. E. Borthez, Beclard, Behier, Bonchordat, Bouillard, Broca, Dechambre, Denonvilliers, Follin, Gavonet, Gosselin, Jaccoud, Lasagne, Longet, C. Robin, Cordien, Verneuil, E. Vidal, and Wurtz.

The Bureau was permanently organized December 7th, by the appointment of the following officers:

M. BOUILLARD, President;

M.M. DENONVILLIERS, GAVONET, and CORDIEN, Vice-Presidents;

M. JACCOND, Recording Secretary;

M. E. VIDAL, Corresponding Secretary.

The organization being completed, we requested the Minister of the Interior for authority to carry out the designed project; this authority was granted us March 20th. The Committee of the Bureau immediately reported to the Minister of Public Instruction, who not only gave his entire approbation to this scientific work, but his eminent patronage. The Minister of Agriculture and of Commerce received with no less favor the communication we had the honor to make him; finally, the Minister of Foreign Affairs has given us his support, and promised to recommend the Congress to the representatives of France abroad. Such, Messrs. Editors, is the state of affairs, and we are assured that these eminently favorable conditions are of themselves powerful guarantees of success. But, on the other hand, the Congress derives from its special character, an importance which cannot be misunderstood.

Passing the limits of nationality, between which have been closed, until now, medical assemblies, the National Congress of Paris will not be a simple convention of Doctors, but it will be



the consummation of the scientific movement of our age, and the first visible act of that intellectual alliance which will unite the laborers of every country.

Knowing the devotion and the zeal of the medical press to the true interests of science, we therefore presume that its valued concurrence will not be withheld in the important affair. In its approaching meeting, the Committee will be employed in the elaboration of the regulations and of the programme of the Congress, which, when completed, we will have the honor of communicating to you. Accept, Messrs. Editors, our thanks and assurances of our highest regard.

In behalf of the Committee :

M. BOUILLARD, *President.*

M. JACCOND, *Secretary.*

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#### CRYPTOGAMOUS ORIGIN OF FEVER.

A counter-claim to the alleged discovery of the cause of malarious fever by Dr. Salisbury, is set up by a French physician, to which the Boston Medical and Surgical Journal objects on the ground, that the main facts proving the cryptogamous origin of this variety of fevers were made known by Dr. Salisbury before that of Lemaire, the French investigator claiming priority.

About the year 1847, Dr. Mitchell, of Philadelphia, published his opinions in regard to the cause of certain febrile affections, which, from our recollection of the theory promulgated by him, (for we have not the pamphlet before us) ascribed the cause to cryptogamous poisoning.

We take pleasure in announcing that a valued and talented contributor for the Atlanta Medical and Surgical Journal is investigating this subject and will, perhaps in the next number, furnish our readers with some valuable suggestions on the Cryptogamii, and of their probable connection with the production of malarious or remittent and intermittent fevers.

The experiments of Dr. Salisbury, some of which have already been published in the June number of this Journal, seem to be

very conclusive in many particulars. Should they be verified by others, to the extent of settling permanently this question, we will have prominently before us the great advantages derived from improvements in the modes of scientific investigations. To the microscope, and the improvements in its use, are we indebted for many valuable facts in etiology and pathology—practical facts which lead to decided improvements in the treatment of disease. Ingeniously wrought theories, made plausible by the talent of the author, and recognized by the medical world as true, for ages, may be overturned in a day, by ocular demonstrations of stubborn facts in the use of this instrument.

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#### NEW YORK ACADEMY OF MEDICINE.

*General and Specific Hygiene against Cholera.*—The following resolutions touching the prevention of cholera by sanitary regulations was forwarded for publication in the Journal by James Anderson, M. D., President of the Academy:

##### PREAMBLE AND RESOLUTIONS.

WHEREAS, The New York Academy of Medicine has endeavored to promote among its own members, and throughout the medical profession, a spirit of exact and practical inquiry into the preventive and remedial treatment of epidemic cholera; therefore, be it

*Resolved*, That this Academy hereby express its confidence in the utility of general and specific hygienic measures as the best means of protection against the pestilential prevalence of cholera in any locality where it makes its appearance; and that the most thorough scavenging, cleansing, and disinfection are absolutely necessary means of averting this pestilence in the cities and populous towns of our country at the present time.

*Resolved*, That in the judgment of the Academy the medical profession throughout this country should, for all practical purposes, act and advise in accordance with the hypothesis (or the fact) that the cholera, diarrhoea and "rice-water discharges" of cholera patients, are capable, in connection with well-known localizing conditions, of propagating the cholera poison; and that rigidly enforced precautions should be taken in every case of cholera

to permanently disinfect or destroy those ejected fluids by means of active chemical agents; also that with the same object in view, the strictest cleanliness of person and premises should be enforced upon all who have charge of the sick; also, that all privies, water closets, and cesspools should be kept thoroughly under the control of disinfectants.

*Resolved*, That we regard the nature and causes of cholera infection, so far as the sick or their discharges can propagate it, as being so susceptible of control that there should be no fear or hesitancy in the personal care of the sick and all that pertains to them.

*Resolved*, That immediate and thorough cleansing and disinfection of all persons, clothing, and things that have been exposed to the discharges or persons of the sick with cholera constitutes the chief end and object of any rational quarantine or external sanitary police regulation against cholera.

*Resolved*, That, for the purposes here mentioned, an external sanitary police is desirable in all great maritime and river towns, but that such sanitary regulations need not seriously embarrass commercial intercourse and the interests of trade.

*Resolved*, That the main source of protection against epidemic cholera at the present time is to be found in the vigilant and effective operation of sanitary measures, municipal, domestic, and personal.

*Resolved*, That the New York Academy of Medicine cordially invites the physicians of every city and village throughout our country to urge the immediate adoption of adequate measures of sanitary protection against the introduction and ravages of cholera, and that to this end we pledge our brethren and the public the hearty and continued co-operation of this Academy.

The above resolutions were unanimously adopted by the Academy.

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*Chlorodyne*.—We are in receipt of a Circular from Albert Ross & Co., Cincinnati, making known to the Profession the preparation, by Mr. E. A. Chandler, of "an article *fully equal, and in some respects superior*, to the English Chlorodyne."—The preparation contains, in thirty drops of the Chlorodyne, "one-eighth grain morphia, one quarter grain ext. cannabis, four drops chloroform and a small proportion of the oils peppermint and capsicum." We have tested, to some extent, the anodyne virtues of the Chlorodyne, from a specimen sent us by the above firm, and think favorably of it.

ATLANTA  
**Medical and Surgical Journal.**

NEW SERIES.

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OCTOBER, 1866.

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ORIGINAL COMMUNICATIONS.

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ARTICLE I.

*Some Remarks on the Therapeutic Effects of Gossypium as an Emmenagogue and Parturifacient.* By W. C. BELLAMY, M. D., Columbus, Georgia.

Having been, during the last few years, on account of the late terrible and disastrous war, cut off from the rest of the world, by the blockade of our ports, and commercial intercourse with the northern part of our own country being closed, it became a matter of necessity with us to develop and apply to the alleviation of disease whatever indigenous remedies we might possess. Under the pressure of this necessity, many of our ablest physicians made numerous experiments in the practical use, not only of those substances which, though possessing medical properties, had never been used to any appreciable extent, but also to bring to light the medical properties of many articles hitherto unknown to the profession.

Being myself, among the rest, subjected to the same inconvenience, necessity compelled me to experiment with and finally to develop, to my entire satisfaction, the therapeutic effects of the gossypium, (our southern staple product, the common cotton

plant,) as an emmenagogue and parturient. Needing, but not being able to obtain, the ergot, and remembering the observations of Dr. Bouchelle, of Mississippi, in regard to this plant, as recorded on page 388 of the U. S. Dispensary, edition of 1858, I determined to put it to the test. The paragraph referred to says: "The root of the plant has been employed by him, and he believes it to be an excellent emmenagogue, and not inferior to ergot in producing uterine contractions. He also states, that it is habitually resorted to by the slaves of the South for producing abortion; and he believes it acts in this way without injury to the general health." To assist labor, he makes a decoction by boiling four ounces of the root in a quart of water to a pint, and gives a wine-glassful every twenty or thirty minutes.

The first case in which I tried the remedy was a negro woman, patient of one of my confreres. It was a case of tedious labor, and not being able to obtain the ergot, a consultation determined him to try my new remedy. But the large size of the dose, and the shortness of the intervals, given as recommended by Dr. Bouchelle, deterred me, fearing the bulk would overload the stomach, and nauseate the patient too much. I therefore prepared a compound fluid extract, and concentrated it, so as to reduce the size of the dose to a tea-spoonful, gave him a bottle of it with directions to give a tea-spoonful every twenty or thirty minutes, requesting him to give me the result of his observations. On the following morning, he called upon me and informed me that the medicine had subjected him to a considerable degree of mortification; that the labor was progressing very slowly; that he had little confidence in the medicine, and that he thought he would have ample time to visit another patient near by. Gave a dose of the medicine, and leaving the bottle with directions to give a tea-spoonful every twenty minutes, went to visit another patient; was gone perhaps three-quarters of an hour, or an hour at farthest, and returned to find to his no less astonishment than mortification, that the labor was completed—that the woman had given birth to a good-sized, healthy child, with very little trouble, after having taken not more than two or three doses of the extract of gossypium.

Soon afterwards I had occasion to use it myself in several cases of tedious and protracted labor (no one case where the labor had lasted over forty-eight hours) with the same happy results, and I had the pleasure of seeing all the patients, to whom I had given it, go into a rapid state of convalescence, without observing a single pernicious symptom in any of the cases. Finding the remedy to act so charmingly as a parturient, I felt sure it would succeed equally in amenorrhœa and dysmenorrhœa. I, fortunately, soon had an opportunity of trying it in the former, as well also as in dysmenorrhœa. The patient was Mrs. W., a most estimable lady of full plethoric habit, short neck, weighing about two hundred pounds, and about 35 years of age. She had been troubled with a suppression for more than twelve months, and had been at irregular intervals troubled in the same way for some years previously. She was troubled with it at this time, as I said, for more than twelve months, with all the accompanying unpleasant symptoms, when she applied to me. After the exhibition of aloetic laxatives, I gave her my new remedy, with which she was to commence about a week before her regular period and take a tea-spoonful night and morning until the day arrived for the regular menstrual discharge, when she was ordered to take her bed, make her feet and body warm between blankets, and take a tea-spoonful of the extract of gossypium every hour until some show should appear, when, towards evening, to her great relief and delight, she discovered a little show. But that period passed by without much benefit. She was, however, ordered to repeat the same treatment at her next period, which she did, and was entirely restored, having used an aloetic laxative occasionally, as she was continually constipated.

Shortly after this, I had another opportunity of trying it in a case of dysmenorrhœa, in a robust, sanguine young widow. To her I gave during the period a tea-spoonful every half hour, under which treatment the discharge soon became natural and without any pain.

I am fully satisfied, from the experiments and impartial trials I have given the remedy, that it is fully equal, if not superior, to ergot in promoting the various functions of the uterine organs.

I look upon it as a sure, speedy and safe remedy, not only for difficult, painful, contracted labors, but also to control all the irregularities of females and to alleviate their peculiar monthly sufferings. It is very certain that its effects are so powerful upon the uterine system as to produce miscarriage, if administered during pregnancy. I feel that its merits cannot be too highly extolled, and hope you will call attention to it and that it may be brought into general use. It is too valuable a remedy to remain hidden in the depths of obscurity. I have made arrangements to have it prepared from the recipe I used after the manner of Tilden's fluid extracts, for the convenience of physicians who may like to use it. I consider it preferable to ergot.

The proper time to gather the root is, when it is as old as possible without being injured by the severe frosts; therefore it is best when gathered during the months of October and November. If gathered before October, it is not sufficiently matured to possess its virtues to the fullest extent, and if taken later than November, it is apt to be injured by the frost. As soon as I am able to get some of the extract prepared, I will send you a bottle of it with the desire that you try it and give us, through the medium of your valuable Journal, the result of your experiments and observations on its use. I do not propose to prepare it as a patent medicine, for it is too great a blessing to suffering females not to place it within the reach of all.



## ARTICLE II.

*Is Quinine a Partus Accelerator?* By D. L. PHARES, M. D.,  
Newtonia, Mississippi.

"There was a tendency to congestion, often from the first, almost always in progress; hence the value of this combination. In a case (a company laundress) of relapse, attended with rapid and feeble pulse, pungent heat of the skin, etc., quinine and capsicum were used freely, and in the course of eighteen hours, the patient

was considered out of danger. Unfortunately, in about twenty-four hours from the second attack of fever, abortion of a three months' foetus (with considerable hemorrhage) occurred, reducing the patient to an extreme condition. The combination of quinine and capsicum was steadily continued, in addition to ether, sulphuric brandy, etc., until the urgent symptoms passed off, and the patient recovered." *Report to Surgeon-General on Epidemic Fever on Sullivan's Island, in 1850.* By John B. Porter, M. D., Surgeon U. S. A.

While looking over the report quoted above, my eye incidentally caught the above lines, which attracted my attention, from the fact that, last night, my friend Dr. Carruth asked me if I had ever observed any cases of abortion follow the exhibition of quinine. Dr. W., of A., having observed several abortions occur in cases in which he had given quinine, directed his attention more especially to this subject, and finally became convinced that quinine induces abortion. Hence he abstains from its use during pregnancy. However, some months ago, having a case in which the intermittent became very annoying to a pregnant woman, and refused for many weeks to yield to other remedies, Dr. W. finally, with much reluctance, gave quinine. Abortion soon ensued. He "will never again give quinine to a pregnant woman."

Dr. P., of C., has repeatedly noticed a similar sequence of events, and hence positively refuses to exhibit quinine during pregnancy, declaring that it certainly induces abortion in his hands.

Several similar cases had recently come to the knowledge of Dr. Carruth. In one of these, Dr. C. exhibited quinine, and soon after, meeting Dr. P., told him what he had done. Dr. P. replied: "She will be sure to abort;" and abort she did, twenty-four hours after taking the medicine!

Dr. C. contended that not the quinine, but the morbid conditions requiring its use, caused the abortions in these cases. The cases in several instances seemed rather against him. But in the above-mentioned case, it should be noted that the lady, six months advanced in a first pregnancy, had within a few days made several long rides on horseback and taken other rather severe exercise,



had been much troubled with vomiting and was having two chills a day; enough, surely, to induce abortion without the aid of quinine.

What is the experience of others in regard to the parturifacient properties of quinine? Dr. Porter does not seem to have suspected it in the case quoted from his report. The extract contains all he says about the case, his object being merely to show the efficacy of quinine and pepper tea in congestive, intermittent fever.

Some three weeks ago, I exhibited quinine in full doses, to a delicate, sensitive lady, *enicienta* six months, having intermittent fever with *slight discharge and pain about the uterus*. No miscarriage occurred. And I can say emphatically that abortion has never followed the use of quinine in any case in my practice.

Small-pox, measles, ague, pertussis, dysentery, and many other diseases, when severe, induce abortion, or, in the non-gravid uterus, sanguineous discharges. There are so many ways of producing abortion by disease or accident, that I cannot readily assent to so grave a charge against one of the most valuable agents of the *materia medica*, unless sustained by unmistakable evidence.

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Since writing the above, a report "*On the Medical Topography and Diseases of Fort Gibson, Arkansas*," has come into my hands. During four years, the hospital was in charge of Surgeon Randall and Assistant Surgeons McCormick and Coolidge, the last being the reporter. The report states that "The annual average of intermittent fever for the four years under consideration, is found to be 238 per cent. . . . The aggregate mean strength of the command being 844 men. . . . There were 2252 cases of intermittent reported." Many modes of treatment were tried—that by large doses of quinine, 15 to 20 grains, affording in all cases the most satisfactory results in every respect. One paragraph, exactly to the point in question, runs thus: "In fevers occurring in pregnant women, the quinine was given more freely than in ordinary cases, it being deemed important to prevent a return of the paroxysm, in order to prevent abortion or miscarriage, a result never caused by the use of quinine." Well and

truly said, and as apropos as if written expressly to answer my question. Quinine preventing a return of the paroxysm of intermittent, (perhaps the most fruitful source of abortion,) prevents miscarriage. Withholding the quinine, by allowing a weakening of the system and strengthening of the causes of abortion, permits the latter to occur. In other words, by delaying the remedy too long, the woman passes into a condition so strongly predisposed to miscarriage, that quinine is unable, or simply fails, to prevent its occurrence.

### ARTICLE III.

*Valedictory Address to the Graduating Class on behalf of the Faculty of Atlanta Medical College, at the Annual Commencement, August 31st, 1886.* By HENRY JACKSON, ESQ.

#### GENTLEMEN OF THE GRADUATING CLASS:

By request of the Faculty of this Institution, the duty devolves upon me this morning of pronouncing to you their final farewell; of severing the last link of the chain that has hitherto bound you and them together; you as students, them as professors; you as earnest seekers after knowledge, them as ever-gushing fountains of wisdom, from which you have drank the pure and sparkling waters. This is a duty both painful and pleasant: painful in rending asunder the close connection of friendship and love which must ever exist between those who tread together the rough and tedious paths of learning; pleasant in anticipation of the brilliant future that awaits you and the honor with which your success will crown not only yourselves but them also.

With nerves and sinews disciplined for the conflict, you are embarking upon the great Ocean of Life; to be tossed by its billows, to be driven by its blasts, to be dazzled by its sunshine. With chart in hand you commence your voyage: whether its closing

scenes shall find you laden with honors, which joyous anticipation holds temptingly forth, or whether, as stranded wrecks, you will sink into oblivion—your past existence marked alone by the scattered fragments of hope's young argosy, and the mourning and seething of the engulfing waters—is a question to be solved by the future. The test has yet to be applied: do but your duty, and the solution will be pleasant.

You have embraced a profession which is justly styled learned, and yours will be the part to sustain its title. We live in a progressive age: the revolving years pour forth countless innovations upon science, and what the human mind of yesterday could but conceive of, becomes the common place of to-day. All the energy, all the perseverance of the youth of the present generation will be required to keep pace with the rapid strides of improvement. To keep pace, did I say? This is not sufficient: it will be theirs to lead. You have passed through a great revolution; you have seen old principles overturned and new ones established; you have followed the hearse of the short-lived but glorious Southern Confederacy, and have wept over its grave; you have acquired character and force of will from the never-failing, but hard-hearted master, experience, and, with a determination worthy of the fair land that gave you birth, it is left for you to fulfill your part in carving from the present chaos a country and a country's rights.

To enable you to grace the high position which your profession will give you, to achieve professional fame, and to reap professional reward, constant labor and a never despairing fortitude must be the controlling principles of your lives. Many dazzling castles will be depicted by a vivid imagination; many will fall in ruins to the ground: block upon block, pillar upon pillar, marble upon marble, you will rear your towering palace to the skies but to behold the magnificent structure come crushing to the earth. Then, my friends, will the heart be tried; then will be generated the stern resolve that reveals the true man or the desolating feeling of despair which destroys the too feeble aspirant. Meet misfortune with a bold front! Learn wisdom from her wintry blasts, and press onward, a wiser though it may be a sadder being. Let her icy hand cool the intellect, but let the heart be preserved in

all its freshness and purity! Let not that be chilled! Once touched by the deadening frost, like the sensitive plant, it closes within itself, never to open again till summoned to meet its great Creator. Of late, adversity has dealt severely with us: the meteor-like appearance of our Southern Cross, which, for a time, illumined the horizon of nations and dazzled the world by its brilliancy, has passed from existence, leaving us almost in obscurity; but the youth of the South have only to look to him, who led them with honor, if not success, through the late protracted war, to find an example worthy of imitation. The old warrior, at length overcome by force, is now preparing the coming generation for the intellectual conflict. More honored and respected at the head of the Washington College, than when presiding over the destinies of a new-born nation, the world appreciates the grandeur of the man evincing itself in the philosophy of heroism.

At the commencement of life's career, do not cherish in your bosoms the poisonous thought that you are homeless and countryless; on account of the present unhappy political aspect of the land. It is for you to share in redeeming the fairest portion of the globe from her subordinate position. If our unfortunate South is not to look to her youth for redemption, what hope has she? If they desert her in the hour of her misfortune, she may well submit to the iron heel of despotism without a murmur. The thought is a false one: you have a home; you have a State, and, as a Georgian, I can say, a State and a people upon which the Almighty has impressed his never-failing insignia of greatness. The history of the world establishes the fact that revolutions precede the greatest prosperity; the flow of blood seems to bring forth true virtue, and to add an impetus to the flagging energies of a people. When was Rome arrayed in greater splendor and majesty than in the palmy days of Augustus, whose illustrious reign sprang from the assassination of the noble Cæsar? When has the power of England ever assimilated to that which she exhibited in the time of Cromwell, the regicide? And surely the hero of Austerlitz, whose greatness the mind can scarce compass, was the child of a revolution, and immortalized the age in which he lived by a baptism of fire and blood. Rome, under Augustus,

England, under Charles II., and France, under Louis Napoleon, present illustrations both of the establishment of monarchies from republics and of republics from monarchies—each mutation marked by terrific carnage, destruction and confusion; yet, at what periods have these nations excelled their development under the leaders and forms of government which sprang from revolutions? The ocean never boasts so lofty a crest as when lashed into grandeur and power by the commotion of storms, and the fury of contending winds. Then it is that the rich treasures are heaved up from his agitated bosom to be gathered in the succeeding calm. God grant that we may now be experiencing the last shocks of the huge thunder cloud which has so long overshadowed us; that passion, self consumer, is about to give place to the reign of reason! You and I, my friends, will have long since been gathered to the dust of our ancestors—rivers will have changed their course—the earth have ceased to give forth her fruits—suns to shine and the rains to fall, ere prejudice and fanaticism shall have achieved a final victory over truth and right: the justice of the Almighty is more immutable than the laws of nature.

Let your hearts beat with generous ambition to attain eminence in the profession you have selected—one so elevating to those who appreciate their high calling. Man, the noblest work of God, is your study, and a lifetime of intellectual labor may be expended in acquiring a thorough knowledge of even one minute part of his complicated organization. You are but upon the threshold of the vast science which you must have entirely mastered ere the crown of honor will be awarded you. The discoveries and improvements which expand it are so numerous and rapid that constant application alone will enable you to be familiar with them; and of all pursuits which the varied tastes of man induce him to follow, that of medicine demands, in behalf of mankind, his most thorough comprehension. In embracing it, you assume a heavier responsibility than rests upon your brethren of other professions. Duty to your fellow-man, duty to yourselves, and duty to your God demands that every faculty and every energy which his benign Providence has bestowed, should be exerted, to its utmost extent, to render you efficient in the discharge of the calls that may be made

upon you. As a class, you have, in the ordinary course of human events, at least twenty years of intellectual effort before you. What may not be achieved in that time? You must realize that the great mountain of labor is yet to be scaled. You have but rendered yourselves worthy to be called toilers up that rugged step. Schiller has most happily illustrated the necessity of a thorough digestion of all learning to make it available, in a little ballad, termed "Breadth and Depth":

"Many bright wits in the world one sees,  
Universal, indeed, in knowledge,  
On the charm to attract and the art to please—  
Their love could perplex a college.  
So fond of the learning they show with such pride,  
That she seems, happy men, their monopolized bride.

"And yet they go out of the world quite still,  
No trace of existence leaving;  
Ah! he who would really the Great fulfill,  
And win what is worth achieving,  
Must silently gather, and, hour by hour,  
In the smallest point, store the amplest power.

"Though the stem may rise proud in the air aloft,  
Broad shade through the branches render;  
Though the leaves may be bright and their fragrance soft,  
'Tis not they that the fruit engender;  
From the kernel alone, though so small it be,  
Comes the Pride of the Forest: it hides the tree!"

In the discharge of your professional duty you will be carried to the abodes of moral as well as physical anguish. Towering mansions and humble cottages will be the scenes of your labors. "Pallid death beats, with an equal tap at the hovels of the poor, and the palaces of the rich." Your art failing to achieve success, you will be frequent witnesses of the last flashes of life's expiring lamp. You will be often present

"In that dread hour when silent sorrow fears to sigh,  
Till all is past"—

some glorious soul, perhaps, having shed its brilliant light upon an admiring world, returning to the great Ruler of the Universe from whom it sprang, once more consigning its earthly tabernacle to kindred sod. The immaterial to the immaterial, the material to the material—such is the inevitable law of nature. It will be for you to sustain suffering humanity in its deepest affliction. The hour of the physician will have given place to that of the true

hearted man. On these trying occasions you will be assisted by noble, loving, sympathizing woman.

"O, woman! in our hours of ease,  
Uncertain, coy, and hard to please,  
And variable as the shade  
By the light quivering aspen made;  
When pain and anguish wring the brow,  
A ministering angel thou!"

O, mothers, wives, sisters, daughters of our sunny South, immortality in this world, and Heaven in the next can but reward you for the untold anguish you have, in days now past, removed from poor, suffering man—inspiring the hale, cheering the sick, comforting the dying; the departing soul winging "its flight" through "the regions of night," scarce discerning the angel of Heaven before from the angel of earth behind.

Philosophy has taught that no power, once put in motion, is ever entirely lost: the least of you, then, will leave an impress, for good or for evil, upon posterity; and it is your duty to mankind, as well as to yourselves, so to live and act as to furnish worthy examples to coming generations. Though small may be the pebble that is cast into the broad bosom of the deep, the ripples produced by its contact with the surging waters, space can barely measure. The march of civilization is ever onward, and those who do not assist in clearing the path before her are but drones among their fellow-men. They may achieve reputation, may fill for a time the high places of earth, but in the end they must inevitably fall from mischievous distinction to their native obscurity. So let each one of you, my friends, pursue that consciousness of rectitude, implanted by an all-wise Creator in his bosom, that, when summoned to

"The undiscovered country, from whose bourn  
No traveler returns,"

he may leave a reputation as spotless as the driven snow, a memory enshrined in the hearts of those that knew him—the departing rays of life's setting sun forming a resplendent arch of beauty over his resting place, presenting to the world the soothing and exhilarating reflection, "I THANK MY GOD, I HAVE DONE MY DUTY."

## ARTICLE IV.

*Report of a Case of Cholera Infantum.* By H. L. WILSON,  
M. D., Atlanta, Georgia.

September 5th, 1866. I was called to see a child, æt. 8 months, who had been spending a month or six weeks in South-western Georgia. The child had been fretful for several days. The mother had been very much reduced from intermittent fever, thereby diminishing the quantity of nourishment previously given, which was mentioned as the cause of the child's illness. Upon inquiry I found that the little patient was having frequent alvine discharges, and prescribed chalk mixture. I was sent for again about two o'clock. The defecations were growing more frequent. I made the following prescription :

Aromat. Syrp. Rhei, 3 viii.

Camph. Tinct. Opii, 3 iv.

Aqua Ammonia, 3 i.

Mix.

Tea-spoonful every two hours until relieved.

I saw the babe again at nightfall ; no improvement whatever. I gave strict attention during the entire night ; applied warm fomentations to the bowels ; gave starch and tinct. opii clysters ; gave during the night at least twenty drops tinct. opii. At day, on the morning of the 6th, there was but little improvement. At nine o'clock, just twenty-four hours from its diarrhoeal attack, it had averaged three evacuations per hour. During the day and night I used the above prescription, together with brandy and mucilage per orem. Also catechu and starch enemata. From 9 o'clock September 6th to 9 September 7th, the evacuations averaged two per hour, with intense griping. To-day, prescribed :

Pulv. Doveri, gr. iii.

“ Camph., gr. i.

Hydrarg. Chlo. Mite, gr. i.

This to be given every three hours.



After taking the first one, he slept soundly : the skin was less hot and harsh ; pulse fuller ; bowels moved less frequently—only having about one action per hour during the day and night. Vomiting ensued, however, to such an extent that I was compelled to stop the use of the powders. The mother was even forced to cease nursing. I applied bran poultices, sprinkled with mustard, to the entire abdomen ; during the night, the vomiting ceased. The following enema was administered :

Acetas Plumbi, gr. xv.

Mucilage gum acacia,  $\frac{3}{4}$  ii.

It produced no impression whatever. I then used by injection :

Nitrate Silver, gr. v.

Mucilage gum acacia,  $\frac{3}{4}$  iv.

It produced a little more griping, but failed to check the bowels, the evacuations continuing, one an hour, during the day and night.

Sept. 8.—This morning at daylight I prescribed :

Sulph. morph., 1-18 gr.

Sub. nit. bismuth, iv. gr.

The child was restless ; pulse small and frequent ; skin harsh, hot and burning to the touch. Ordered warmth to the abdomen. Saw him at noon. Had slept well ; stretched out full length ; no movements of the bowels ; full inspirations ; pulse fell and less frequent. Saw the child about dark ; bowels had been moved only three times ; abdomen flabby ; no pain upon pressure, but growing fretful. I repeated the last prescription with the same delightful effect ; till 11 o'clock at night, when the mother, fearing to repeat the dose, the evacuations became again frequent.

Sept. 9.—Saw the child very early. Gave more morphine and bismuth. Ordered weak sangaree to be given *pro re nata*. Saw the child at one o'clock ; bowels quiet, apparently better. Saw him again at sundown ; had five actions during the afternoon ; found him fretting from prolapsus ani. Ordered the parts bathed freely with cold water.

Sept. 10.—Saw little patient at 8 o'clock. Had one evacuation per hour during the night—the last action containing blood and

mucus, differing from the previous green and watery actions. I ordered mustard and mush to the bowels, and

Hydr. chlo. mite, gr. ii.

Four powders, one every hour.

Also morphine and bismuth.

About ten o'clock he had another bloody action. Saw him at dark; found him quietly sleeping; pulse full and almost natural; skin pleasant; head cool. While there, he had an action evidently from the medicine; no blood; no griping—has been no vomiting during the day. Advised the mother to allow the child to nurse but little at a time. Urged the necessity of great care in her diet.

Sept. 11.—Saw the child early in the morning; found him asleep. Had one action during the night. Ordered the morphine and bismuth to be continued as previously prescribed, increasing the dose of the former to 1-10 of a grain. Also ordered weak toddy, tea-spoonful every two hours. Called in the morning late; found my little patient in deep sleep from the medicine; bowels had been moved only three times since my visit in the morning. The cold application had relieved the prolapsus. He was less fretful.

Sept. 12.—Saw my patient at nine o'clock. He slept pretty well, having only one action during the night. While present, he had two evacuations, one blood and mucus. I gave two grains of calomel to be taken at bedtime. Had prescribed acetas plumbi in the morning, but the mother thought it produced emesis.

Sept. 13.—The child had one action during the night; no blood; no pain; is disposed to play; notices more. I ordered the continuance of morphine, according to circumstances; also warm bath at night; continued the sangaree or toddy.

Sept. 14.—Saw my little patient early. Found him playing with his toys. Pulse good; moist skin; actions more natural.

Sept. 15.—My patient still improves; convalescing rapidly.

Sept. 16.—Saw the child playing on the floor; cheerful and eyes bright. Discharged the case.

## SELECTIONS.

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*Case of Obstinate Vomiting, connected with the Presence of a Foreign Body in the Uterus.* By JAMES BLAKE, M. D., Professor of Obstetrics and Diseases of Women and Children in Toland Medical College, San Francisco.

Dec. 18.—Was called to see Miss C., æt. 22, at 1 A. M. When I arrived, I found she had been suffering from constant vomiting for the last three days, for which she had been treated homœopathically, with the usual result; nothing was retained on the stomach, not even a drop of water or ice. There had been no sleep for the last two nights; in fact, the efforts to vomit never remitted for more than five minutes; nothing, however, was brought up except a little water or mucus. Expression of countenance haggard; tongue clean; skin cool; pulse 80, soft and weak; no pain except that caused by vomiting. I learned that the lady had been in ill health for several months, and that she had been treated for uterine disease. Ordered external application of turpentine over the pit of the stomach; chloroform, gtt. vj.; morph. sulph., gr.  $\frac{1}{4}$ ; to be repeated every hour until the vomiting ceased.

10 A. M.—The first dose of the medicine quieted her, and she slept for a short time. A second dose was given at the end of the first hour, although there was no vomiting, and a third dose an hour afterward. This was rejected, and since then the vomiting has been as bad as ever. Ordered oxalate cerium, gr. iij., every hour. The mixture with chloroform and morphine to be repeated after four hours. As the bowels had not been moved for three days, I ordered an enema with castor oil and turpentine, to be followed, after its action, by one containing half a drachm of laudanum.

4 $\frac{1}{2}$  P. M.—Much the same—patient getting weaker. As I was convinced that the vomiting was uterine, and the condition of the patient was such as to cause anxiety, I took an opportunity of inquiring as to the possibility of pregnancy existing, explaining my reasons for so doing. This was indignantly denied. I ordered brandy and soda water; enema with laudanum to be repeated.

19th.—Symptoms still the same; the laudanum enema had procured hardly any sleep; every thing is rejected a few minutes after

it is swallowed; patient getting weaker, having retained no food or even water on the stomach for the last four days, during the whole of which time there has not been more than a few minutes' sleep. I learned to-day that the vomiting had come on after she had had something done to the womb, which caused her much pain, and that the surgeon had introduced the speculum after he had once withdrawn it, in order, as he stated, to remove a piece of cotton he had left in the womb. Thinking that the vomiting was kept up by the presence of a foreign body, I made a digital examination to see if I could discover it. I found the neck of the uterus enlarged and inflamed, the orifice patulous, and the body retroverted and flexed; could feel no foreign body. As it was time for menstruation to come on, I did not wash out the uterus as I otherwise should have done.

20th.—Rather better; had slept about an hour, and vomiting not so constant when lying quite still, but the slightest movement or attempt to speak, or opening of a door, or even being spoken to, brings on vomiting. Pulse 78, weak; skin cool; nothing retained on the stomach. I ordered champagne and brandy; carbonate of bismuth.

21st.—Better; slept some two hours during the night. Can take raw brandy, although water immediately vomits. States that when she feels the vomiting coming on, a tea-spoonful of raw brandy will check it. During the night there was a remission of the vomiting for three or four hours. Is better when lying on her right side; if she turns on her back, vomiting immediately comes on. Is now so weak that her voice is hardly audible. Ordered enemata of brandy and yolk of eggs. Menstruation came on last evening; had sharp, cutting pains at commencement, but was too weak to notice if any thing came away in the discharge, which is moderate.

For the next forty-eight hours the patient was kept alive by brandy and champagne, and nutritive enemata. It was not until the 24th that any food was retained on the stomach. At this time she was much prostrated, having been eight days without food, during the greater part of the time with constant vomiting and loss of sleep. The pulse was 85, small and weak; skin hot and dry—probably from the stimulants.

From this time the patient gradually recovered, although it was three weeks before she had gained sufficient strength to leave her room. Menstruation lasted the usual time, but was rather scanty. On making an examination per vaginam, about three weeks after menstruation had ceased, I found a piece of cotton in the vagina, such as is used for applying caustic to the interior of the cervix:

and I have no doubt but that this, whilst remaining in the uterus, had been the cause of the vomiting.

The above case affords a most striking example of the effect of mechanical irritation of the uterus in producing vomiting, and would tend to show that where pregnancy acts as a cause of vomiting, the vomiting is owing to the mechanical irritation produced by the foetus, and not to the changes in the uterine system accompanying pregnancy.

The purely reflex nature of the vomiting in this case is interestingly shown by the causes that would give rise to it: the slightest movement, the opening of a door, even speaking to the patient, would bring on an act of vomiting, just as the same causes would give rise to spasm in tetanus or in poisoning by strychnine.—*Pacific (Cal.) Med. and Surg. Journal.*

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*Remarks on Uterine Hemorrhage.* By G. J. TOWNSEND, M. D.,  
of South Natick.

I propose to offer a few remarks upon two forms of uterine hemorrhage, to which we are especially obnoxious in our vicinity. The first form of which I would speak occurs in the unimpregnated uterus, and with nearly equal frequency in the single and the married. It is considered a hemorrhage, and not excessive menstruation, from the facts that the catamenial periods are more or less regular as to time, often remarkably so; that the menstrual flow begins moderately and normally, the patient, except in extreme cases, being able to keep about the house; that this continues, gradually diminishing, after the second or third day, until the fifth day, and that then, with remarkable regularity in many cases, the true bleeding commences. From that day, for a longer or shorter period, the sufferer is confined to the bed, and the loss of blood is often very great.

The source of this bleeding is ulceration in some form or other, or exuberant fungoid granulations, like those so common on the surface of the body in the second stage of carbuncle.

In those cases where the ulcer is on the external surface of the os and cervix, the diagnosis is easy; but in those other cases, where it is entirely within the cavity of the cervix, it is not always easy to recognize it. And ulceration, in this latter situation has

given rise to the most frightful hemorrhages I have met with in the unimpregnated organ. More than once, a grave suspicion of the existence of an intra-uterine polypus has been aroused, only to be dispelled by the most positive assurance of the normal size of the uterus, the unaltered condition of the uterine cavity, and by the successful result of local treatment.

The prognosis in this form of uterine hemorrhage should, in extreme cases, always be guarded. For though it seems a simple matter enough to promote the healing of an ulcer in these regions, the constitution of the patient is often too seriously impaired before our attention is called to the disease. The usual unfavorable termination, in the cases which have come under my observation, has not been that which occurs in chlorosis and in anæmia. The great scourge of our climate, phthisis, has closed the scene in all my unfavorable cases, and the arrest of the hemorrhage has been followed by the final cessation of all catamenial flows and by the rapid development of tubercle. Therefore, when a patient shows an habitually rapid pulse, a tendency to dyspnoea, however slight, a cough, and any physical signs of tubercle, the chances of recovery are fearfully against her. If, in addition, she is not tolerant of tonics, especially iron, her case is the more desperate.

The indications for treatment are simple enough, viz. : to control the hemorrhage during its occurrence, to promote the healing of the ulceration, and to build up the general health of the patient.

The ulceration can be made to heal readily enough by the energetic or thorough application of nitrate of silver, and by the employment of sedative, alterative, and astringent applications by means of medicated pessaries and injections. When it is confined to the cavity of the cervix, the pencil of caustic requires to be introduced as far as possible, and should be sharpened by means of a wet sponge, that it may reach every part of the disease ; otherwise a portion may be hidden between the rugæ of the mucous membrane, and, escaping the touch of the pencil, may render the case unnecessarily protracted and tedious. To be effectual, too, the application should be painful, the lining membrane being much more sensitive than the covering membrane of the os. It is unnecessary to enlarge upon the means of promoting the cure, as they are treated fully enough by all authorities upon the disease.

The means of arresting the hemorrhage at the period of its occurrence have not been treated of so fully, and it may not come amiss to notice a few of them.

During the first four or five days, the menstruation being usually

natural, or but little in excess of nature, nothing is to be done, save to restrict the patient to a very moderate quantity of exercise. But when, upon the morning of the fourth or fifth day, the true bleeding commences, it is of vital importance to the safety of the patient to check it as soon as possible. To this end cold water injections by the rectum are of great use in two ways: by cooling down directly and constricting the uterine engorgement, and by freeing the bowel from all accumulations, which of themselves greatly aggravate the trouble.

Cold applications to the bowels and perfect rest in the recumbent posture should also by no means be neglected. But the remedy upon which I am accustomed to place my chiefest reliance is the tampon of solid alum. This should be applied well up to the os, as soon as the true hemorrhage comes on; this can easily be done by the patient, herself, and it should be allowed to remain from two to six hours, according to the severity of the symptoms. It always arrests the flow for the time, and usually for the whole present catamenial period, though if one application be not enough, there is no danger, nor usually inconvenience, in renewing it at intervals of twenty-four hours two or three times.

As to remedies by the mouth, they do not amount to much; though I have sometimes derived decided advantage from the use of alum in powder, in five-grain doses, combined with some aromatic, and repeated at short intervals, say every two hours. The stomach usually tolerates it very well.

Lead I never use, and the vegetable astringents have not much power, or else disturb the stomach, with the exception of matico, which is often a valuable tonic where the stomach bears nothing else. Iron, in the early stages of the trouble, almost invariably makes matters worse, no matter under what form it is given. Later in the case, it is often invaluable.

There is one simple remedy, which we are in the habit of considering nearly inert, from which I think I have had quite positive results, and that is the *spiritus lavandulæ compositus*, given in small doses, fifteen drops every three hours. It is not only an acceptable stomachic and restorative, but has a decided astringent influence, in mild cases diminishing the sanguineous discharge to a marked degree. In full doses it rarely fails to disagree, causing nausea and præcordial distress.

Stimulants, spiced wines, brandy, and the like, so often resorted to for relief from the faintness which loss of blood causes, only aggravate the disease while temporarily relieving the symptom, and are in all cases, with very rare exceptions, positively injurious and contra-indicated.

The second, and much the most immediately formidable form of uterine hemorrhage to which I would allude, is that which occurs as a consequence of delivery.

The usual story in these cases is, that the mother was over-worked to the last moment, and labor begins with the whole muscular system more or less exhausted. The number of children the patient has borne has much influence in producing the trouble, the uterus wearing out, as it were, under the very frequent calls upon its energies. But some very serious cases of *post-partum* flowing have occurred, under my care, in primiparae.

A fortnight's wash, or a week's baking for a large family are amongst the most common preliminaries of such cases. But this, again, is not an invariable rule, for one of the most insidious and dangerous cases I have ever had was that of a wealthy patient, who enjoyed an average of very good health, and who lived in every way most rationally. The constitution of the blood had probably much to do with the trouble in this case, the patient being naturally of a lax fibre, though bearing muscular exercise well enough, and accustomed to take a good deal of it.

The warning symptoms of hemorrhage are well enough known. The restless, impatient toss of the head first, the hasty ejaculation, the hemorrhagic pulse, never less than 80, often much above 100, the absence of all uterine tumor after the expulsion of the placenta, are all warnings readily recognized and sufficiently appreciated by each of us. There is, however, one symptom which has been an almost invariable attendant of my severe cases, and which I have never seen alluded to; and that is, a peculiar, indescribable odor of the placenta, membranes and lochia, very penetrating, very different from their natural odor, and that is bad enough, and like nothing else that I know of.

That this has some connection with the flowing, I am led to believe from the fact that before I recognized the frequency of the coincidence, the presence of the taint always caused a feeling of uneasiness and apprehension, too often confirmed by the subsequent course of events.

As to the means of arresting the bleeding, it is unnecessary to speak of these that are well known. Ergot, galvanism, stimulus, cold pressure on the abdomen, causing the uterus to expel its contents and to follow up its contractions afterwards, we all have used. But there are a certain proportion of desperate cases in which all these means fail us, and where it becomes a serious question what to do next. Writers tell us that the act of vomiting conduces to the safety of the patient, producing, or being followed by contraction of the uterus. Emetics have been suggested



as a means of producing contraction. It has not been so in my experience, and I have grown to regard vomiting as the most formidable symptom possible. Ergot, brandy, wine, ether, hot drinks and cold, ice even, will sometimes come up as fast as we turn them down. Each act of vomiting has been followed by a relaxation of the uterus the more obstinate, by a collapse the more alarming, the uterus pouring out blood, like water from a well saturated sponge. I would here say that I always regard it of the utmost importance that the uterus should, by contractions, expel the placenta in all cases, except where there is adhesion or hour-glass contraction. With these exceptions, it is rare that we need fail in causing it to do so, and usually a few minutes' compression will cause the contraction to be permanent.

The means, then, that have never failed me in the most severe hemorrhages are, in the first place, the local application of ice. The safety of applying ice to the os uteri, in cases of non-contraction, has often been discussed. It seems to me the only element of danger in this treatment is, that it is not carried far enough. Ice, to be effectual, should be carried through the os up to the very fundus, and should be kept there; the hand and arm acting as a tampon and preventing the escape of blood from the sinuses until the uterus contracts. A cold left hand upon the abdomen materially assists in producing the contraction, and when it occurs, and not until then, be the time longer or shorter, should the uterus be allowed slowly to expel the hand and arm. Once contracted in this manner, it has never relaxed again in any of my cases.

In the second place, to allay the vomiting, to quiet the terrible restlessness, to avert the collapse, when all other means have failed, I have depended upon opium, given in small doses at very frequent intervals. Ten drops of the acetated tincture of opium, or fifteen of laudanum, with an equal quantity of the aromatic spirits of ammonia, in a very little cold water, not more than a drachm, given every fifteen minutes, constitute my usual prescription. This is very rarely rejected, and should be persevered with if it is. Two hours is the longest time I have stood over a patient waiting for the desired result; the first fifteen minutes of quiet sleep, which puts her life out of immediate danger. We can all testify as to what a load of anxiety this brief interval of repose removes from the attending physician, and the great relief it brings us.

As to the *modus operandi* of opium, I can say nothing, except perhaps in the words of Dr. Meigs, that it acts "as the great restorer of the vital forces." I certainly can add the small weight

of my testimony to his when he says, alluding to these cases, "Gentlemen, be not afraid of opium."

I offer these remarks, gentlemen, not as any thing new or original, but simply as the record of my own experience upon given points, and as just so far valuable and no farther.—*Boston Medical and Surgical Journal*.

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*Remarkable Case of Gunshot Wound of the Bladder, requiring two Operations of Lithotomy, one seven and the other eleven Months after receipt of the Injury, and an Operation for Fistula in Peineo, six months later: Recovery perfect.* By CARLISLE TERRY, M. D., Columbus, Georgia.

J. A. M., Co. E., 39th Alabama Regiment, was wounded on the 28th of July, 1864, in battle near Atlanta, by a minie ball passing through the sacrum near its left iliac junction, then traversing the pelvis, it passed through the walls of the bladder, and made its exit through the pubis to the right of the symphysis. He was admitted into hospital in Atlanta, and remained there fifteen days. While there the anterior wound healed. About that time an abscess formed above the anterior wound, near the antero-inferior spinous process. He was admitted into Walker Hospital, Columbus, Georgia, under my charge, on the 5th of September, 1864.

The urine was then passing partly from the posterior wound. Soon after, several abscesses formed near the wound of exit, close to the right side of the scrotum, involving the right testicle, most of which sloughed out, probably on account of injury to spermatic vessels. The posterior wound did not heal, until three months after the receipt of injury. About that time, the abscesses around the root of scrotum also healed, yet the fistula near the antero-inferior process remained open, through which, was discharged a portion of the urine; also several small pieces of bone. Small pieces of bone and several urinary calculi also passed through the urethra during this time.

The suffering experienced during micturition, and the pain in pelvis, induced me to explore the urinary canal with a sound. On

passing the instrument into the membranous portion of the urethra, a grating sensation was felt. The diagnosis having been made now certain by subsequent examinations, an operation was determined upon for the removal of the foreign body.

On the 3d of March, 1865, the patient was placed on the table, and a straight staff passed into the urethra down to the foreign body. It had been impossible to pass a sound or catheter into the bladder, or to any distance below this. The cause was disclosed as the operation proceeded. Upon opening the urethra, a piece of bone one and one-half inches long, was found lying transversely across the urethra and imbedded in the muscles. This was found to be covered with calcareous matter, and was, after a little manipulation, removed with the forceps. Further examination then disclosed a number of pieces of bone and a large amount of calcareous matter in the membranous portion of the urethra, which was found to be much elongated and attached to the pelvis, making a short angle around it, thus explaining why no instrument could be passed into the bladder. The urethra from this point was found to be much enlarged, elongated and attached to the inner face of the pubis, the prostate being at the upper end of the symphysis. The finger being used as a director, the remainder of the urethra was carefully opened with a bistoury; many pieces of bone and a good deal of calcareous matter removed. Upon reaching the prostate, the point of the finger could be nearly passed into the bladder. The gland was sufficiently incised with the bistoury, and the finger passed into the bladder, in which several more pieces of bone were found and more calcareous matter. One piece, about the size of a filbert, was found enclosed in a cyst, which, however, was thin enough to be opened with the finger nail. The bladder was then well washed out with copious injections of warm water. So much of the bone was in very small pieces, and the calcareous matter being so soft, a large portion of it was lost, having become mixed with the clots and washed away in sponging. It was thought that about as much as would fill the palm of the hand was removed.

The patient suffered with considerable fever for the next three days, which subsiding, he continued to improve, though much irritated by the passage through the wound of small pieces of bone and sand-like deposits.

On the eighth day after the operation, he had high fever, with severe headache, which continued three days, during which time the urine commenced to flow through the fistula, near the right anterior spinous process, in consequence of which the catheter was introduced into the bladder, through the wound. About

the same time he suffered from inflammatory engorgement of the scrotum.

The patient continued to improve for about one month. The incision healed and urine passed almost entirely through the urethra, except that occasionally the fistula would discharge a little of it. About this time calcareous matter began to be discharged, and increased irritation of the bladder gave evidence that more bone was making its way into it, and small spiculæ were discharged by the urethra. It was judged best to sustain the patient as well as possible, and wait in hopes that after all of the necrosed bone should have been thrown off, another operation might result in a final cure.

In April, the hospital having been broken up by the termination of the war, M. was removed to his father's, some twenty miles from the city. He continued to discharge a great deal of calcareous matter, and became so reduced by pain and irritation, that it was evident that he could hold out but little longer. On the 29th of June, I went down to see him; I found him very much emaciated and suffering all the time great pain and constant fever. I determined to operate at once, (though I had no medical assistance,) aided by his father and two neighbors.

The abrupt turn of the urethra around the pubis, and its attachment to the inner face of that bone, rendered the introduction of a sound to the bladder impossible. A staff was passed in as far as possible, and the usual lateral incision made to it, then a director readily passed from the wound through the remainder of the urethra to the bladder, and the stone was distinctly felt. With a probe-pointed bistoury the urethra was split up and the prostate incised. With the forceps several small pieces of bone and three calculi were extracted, the larger of which was about the size of a guinea's egg; the others the size of a hickory-nut. As at the first operation, there was a large amount of soft calcareous matter discharged with the urine, when the prostate was incised. After thoroughly washing out the bladder, an examination with the finger showed that the organ, so far as could be thus ascertained, was in a healthy condition, (which it was not after the first operation,) and gave reason to hope that the relief would be permanent.

The patient bore the operation well, and passed a comfortable night. I left the next morning, leaving a note requesting my friend, Dr. Geo. Heard, who lived five miles distant, to look after the patient, which he kindly did.

M. recovered rapidly, and with no bad symptoms. The fistula in the groin now quickly healed, but unfortunately the incision

failed to heal, and except when closed by the finger, nearly all of the urine passed through it. Dr. Heard made several attempts to close it by cauterizing, but as he could not pass a catheter into the bladder through the penis, they were all unsuccessful.

In December, I had M. brought to town. He was then in health, and had passed no calcareous matter since the operation in June, but a large fistula remained in the perineum, through which all the urine escaped.

I first made an attempt to use a gum elastic catheter, which I could introduce readily into the bladder, by passing it through the penis to the fistula, and then with a strong director bending it, and guiding it into the bladder. I soon found that this would not answer, as in consequence of the abrupt bend in it, it soon became softened by the urine, and losing its elasticity, would become impervious, and the urine would discharge around it through the fistula as before. I then had a silver catheter prepared by bending it very short, and by careful manipulation I succeeded in introducing it into the bladder. Then by scarifying, cauterizing and stuffing the fistula with charpie, I obtained granulation from the bottom, and in six weeks the fistula was entirely closed and the catheter removed.

After nearly eighteen months' confinement to his bed, M. began to walk about and rapidly regained his health.

Upon resuming the erect position, however, he found that he could retain no urine, but that it ran guttatum as rapidly as secreted. Very gradually, but steadily, he regained power to retain it, until at this time, April 26, 1866, he can retain it to the amount of four ounces, when, unless voided, it will commence to drop. As his improvement in this respect has been so steady, it is to be presumed that in time he will be able to retain the usual quantity.

My friend, Mr. W. J. Land, an accomplished chemist of this city, has kindly made an analysis of the calculi, and finds them to consist almost entirely of phosphate of lime, with very slight traces of oxalate of lime, developed upon several small pieces of bone.

The operation on the 29th of June was contrary to the established rule—"always feel the stone before you operate,"—but the impossibility of reaching the bladder, the history of the case, and the certain speedy death of the patient, unless relieved, justified me in it, and the result proved the correctness of my diagnosis. I doubt if the operation for stone was ever before performed, without medical assistants. Mine, in this case, were plain country farmers.

This case, in both operations, showed the advantages of a surgeon's accustoming himself to operate without gorgets, lithotomes, etc. In this case, the bistoury (the instrument I always use) was the only one which could have been used successfully.

The difficulty in getting a silver catheter in, to cure the fistula, can be but poorly shown in the report. The curve was made very short, making nearly one-third of a circle, and which almost any one would say would be impossible to have been introduced. It formed an angle of but little more than  $45^{\circ}$ .—*Richmond Med. Journal.*

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*Scirrhus of Duodenum, Pylorus, and Head of Pancreas.* By  
E. ALLEN WOOD, M. D., McKeesport, Pa.

The history of the following case is remarkable. The unnatural phenomena detailed are well calculated to create doubts of their genuineness. The author would not have ventured to publish it, were it not for the daily notes left of the case, and from which the following is taken; and more especially since he has the concurrence of Dr. Wm. B. Lank, a highly respectable physician, who daily watched with him the progress and termination of the case, and who, with Drs. Donaldson and Miller, saw the structural change at the post mortem examination.

Mr. John S., aged 50, farmer; hard worker and very great eater. Has had dyspepsia for many years, and has been subject to severe attacks of bilious colic. Bowels have been very torpid for a long time, more especially for the last three years have they been obstinately constipated. Five months ago, had one of his attacks of colic, which was more than usually severe. Ever since that time he has been troubled with pain in right hypochondrium, and cannot lie with comfort on his right side. For five months, has had no full and free evacuation from his bowels, and his health has been rapidly failing during that time. He has a sallow skin, and a look of distress or decay, which evinces that some grave disease is gnawing like a canker at his vitals.

He had been treated by an old and skillful physician for a long time, but without improvement. He slowly, but surely, grew worse day by day.

I first saw him professionally June 14th, 1862. His condition and history impressed me with the belief that his whole trouble was gastritis. I urged upon him the importance of a firm and persevering temperance in his diet, habits, etc. Gave him a pill of rhubarb, aloes, and castile soap, *donec alvus soluta fuerit*. For irritability of stomach, he got in pill one-fourth grain nitrate of silver one hour before meals.

Did not see him until June 27th. Nitrate of silver had no sensible effect. He had taken ten of the co. rhubarb pills—two at a dose, and three times a day—also six table-spoonfuls of castor oil, all of which had produced one scanty stool of hardened fecal lumps. Save that one small motion, there has not been, nor is not now any inclination to evacuate the bowels. His abdomen is prominent, full, and hard. Tongue is covered with a thick coating of dirty foul-looking slime. He is weak, which is as much indicated by his pulse as by his feelings. Not much thirst, no appetite. Prescribed enematas of castor oil and turpentine in starch water, to be repeated every four hours until bowels are freely moved.

June 30th.—A few scanty stools have been produced. Complained of a cutting pain in pit of stomach. Applied a small blister over epigastrium. Continued the enematas.

July 2d.—Symptoms becoming worse. Much gastric distress; vomited freely. Among the matter ejected by emesis, were pieces of onions, of which vegetable, he and his wife declared, he had not eaten for *more than two months*. After the first two or three paroxysms of vomiting, the matter was stercoraceous. On careful examination, I now discovered a tumor, firm, well defined, about four inches long, and one and a half broad, and situated vertically at the right side of, and about two inches from the umbilicus. It appeared to be situated within the abdominal cavity, was tender on pressure, and the patient never before knew that it existed. Bowels still obstinately positive. Continued injections.

6th.—Vomiting of stercoraceous matter still continues. Bowels have been opened pretty freely since my last visit. Complains of much distress in stomach. This distress is a little peculiar. He says that he has the painful impression of the contents of the bowels passing into the stomach, which, when it distends that organ, is finally got rid of by vomiting. After this emptying process, the patient has a short interval of comparative ease. There was no account taken of the quantity thus ejected, but I know that it was an almost incredible amount. It indeed seemed, by the amount of fecal matter that came away by mouth and anus, that he had the accumulated ingesta of months to be thus got rid

of. No appetite, very little thirst. Tongue loaded with slimy, rotten-looking coat; very weak. I believed that there must be mechanical obstruction of the bowels. This opinion was coincided with by my friend and neighbor, Dr. Lank, who from this date attended the case with me. However, we could not determine the nature nor seat of the obstruction. We applied a blister over the tumor.

8th.—Much worse. Vomiting of fecal matter still continues. Debility extreme. No sleep, no appetite, great pain in the stomach. Gave him sulphate of morphia, grain one-fourth every two hours until pain abates.

10th.—Much better. Tongue cleaning, pulse fuller; distress in stomach not so great, obtained some sound sleep, has some appetite.

12th.—Not so well; skin very yellow. Bowels not moved for several days. Gave him calomel, grains two, three times a day.

13th.—Bowels moved very freely. Better.

15th.—Bowels still freely moved. The last two stools contain *very much green bile*. Remarkable improvement. What becomes of the *mechanical obstruction* now? He passes bile "fresh and green" from the liver, and that clearly proves an uninterrupted passage, at least from the duodenum downward. Has not vomited for five days.

16th.—Passed a sleepless, painful night. Took a powder of morphia, which quieted him. Felt more comfortable in the evening. Much tenderness over the stomach, where he refers most of his pain. Applied a large blister over this organ, and directed it to be made very sore.

21st.—Messenger came after me early. Found the patient suffering with severe cramp of stomach, or as he termed it, "baking." Gave him an emetic. He threw up a large quantity of water, mucus, and fecal matter, greatly to his relief. Ordered calomel five grains at night, and injections in the morning. Also gave tincture chloride of iron, twenty drops three times a day.

23d.—Pulse 104. Countenance has a suffering, anxious look. "Baking" still continues, and is extremely painful until relieved by emesis. Great quantities of mucus discharges per anum. Profuse vomiting of dirty soily-looking fluid, which, on standing, separates into a ground-like sediment, with clear supernatant fluid. Tongue moist and little coated. Continue calomel and injections, with morphia, *ad libitum*.

24th.—Great prostration, voice weak, tongue covered with foul-looking coating. Vomits freely. Some thirst. Bowels moved. The last alvine dejections are very peculiar indeed. They consist



of kidney-shaped bodies, varying in size from a common bean to a fig. They all appear to have a small pedicle or stalk. They are a bright straw color. Have much the texture and appearance of bits of fine sponge. They float lightly on water, are easily mashed between the finger and thumb into a pasty pulp, losing their spongy character. The whole amount would measure two pints. It is also proper to state that the tumor above-mentioned has shrunk wonderfully in size, although it was unreduced on the 21st. Gave him morphia every three hours. Discontinued the tincture of iron.

25th.—More comfortable. Rested tolerably well last night. This morning, passed a full and not remarkable stool. Vomited in his usual style in the forenoon, and during his last effort, while I looked on, he vomited oil with the matter. He had not taken oil by mouth since June 20th—more than a month ago—and he had vomited scores of times since then, yet he vomits oil! He has had several enemas of castor oil—the last two days ago—yet here he ejects oil by mouth! Pulse 98.

26th.—Passed a very large natural-looking stool without enema. Vomits profusely stercoraceous matter. Says he feels empty and miserable. Gave him sixty drops of laudanum in starch water, by injection. Was greatly relieved in the evening.

27th.—Pulse small and rapid. Stercoraceous vomiting still continues. Gave him nitrate of silver, grain one-fourth every six hours, morphia as needed for the pain, and suppositories containing each ten grains of aloes.

28th.—Sinking gradually. Suffering extreme. Vomits blood, which is intimately incorporated with mucus. Abdomen now appears flat and empty. Thirst not remarkable. Gave him laudanum injections every six hours.

29th.—Vomiting of blood, mucus, and water. The blood is intimately blended with the mucus and water, imparting to it a pale-red color.

July 31st.—He died, suffering and vomiting to the last.

*Autopsy* thirty hours after death. Present Drs. D. Donaldson and Wm. M. Miller.

The stomach contained a small quantity of bloody mucus, and also three almost worn-out cherry seed. The family assured us that he had not eaten cherries since the second week in June.

The walls of the stomach were thinner than natural, and the epithelial coat was wanting. Further than this, there was no remarkable appearance of the organ, except at the pylorus, which, with the duodenum and head of pancreas, was involved in the condition generally styled scirrhous. The parts were thickened,

indurated, and gave the sensation of cartilage under the knife. The duodenum appeared to have the greatest structural change, as if the disease had its primary seat there, and had gradually encroached upon the adjacent parts. The serous coating of the gall-bladder, with all the parts of organs near it—the duodenum, colon, and serous covering of the liver were stained the color of bile, as if that secretion had permeated the walls of the gall-bladder, and spread to the neighboring tissues. The internal surface of the duodenum had a very unique appearance. The surface was covered with shallow indentations, and impressed us with the belief that the “kidney-shaped” bodies, mentioned above, had been here attached, and developed by their pedicles.

No other evidence of disease or obstruction in any other part of the intestinal canal. All other organs healthy.—*Medical and Surgical Reporter.*

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*Case of Retroflexion of the Uterus, of Three Years' Standing, Cured.* By JOHN H. GRISCOM, M. D., New York.

In No. 482, May 26, of the Reporter, are related two cases of uterine flexion, which were remarkable for their extensive and complicated sympathetic effects, one upon the pulmonary and nervous, the other upon the digestive systems; the latter especially notable for the severe dyspepsia and constipation caused by it. In each of those cases, the uterus was restored to its natural position, and all the sympathetic symptoms relieved by very simple means. Simpson's sound was used to reduce the flexion, and this being accomplished, a simple horsehoe pessary, aided by a continued recumbent posture for a few days, sufficed to retain the organs *in situ* long enough to enable the local tissues to become confirmed in tone, and preserve the organs in place.

Another case which lately came under my care, presented still another variety of sympathetic influences, and a combination of symptoms requiring quite a different course of treatment. The patient, a lady from a distant State, sought my counsel in June last, complaining of great distress in the pelvic region, and great prostration and disturbance of general health. Her age is 27, has been married nine years, and has borne three children, besides having had two miscarriages.

An examination per vaginam revealed a most decided retro-

flexion, the fundus pressing in upon the rectum to such a degree as to completely obliterate its cavity, although the uterus presented no evidence of enlargement. It was readily relievabale from its position by the finger alone, so far as it could reach, which was of course insufficient to restore it fully to its normal position. Digitation produced considerable pain, in consequence of a marked tenderness of the vaginal membrane, a discouraging circumstance in appearance, as the use of a pessary of any kind requires a healthy condition of the parts, to enable it to be borne with comfort and efficiency. Observation with the speculum, however, revealed nothing more than a slight redness of the parts, unaccompanied with any thing like ulceration. There was also a decided relaxation and expansion of the posterior *cul de sac*, which, though favoring the use of a pessary, presented a prospect of such a general relaxation of the tissues as would be likely to delay a permanent restoration of the misplaced uterus.

Encouraged by previous successes to rely upon the efficacy of the horseshoe pessary, in combination with a continued recumbency of body, after replacing the uterus by the sound, this course was tried for three or four days, but the excessive heat of the weather rendering confinement to the bed almost unendurable, and the enlarged capacity of the vagina rendering the pessary less available than ordinary, it became necessary to abandon that method of treatment.

About a year previous to my acquaintance with the case, it had been treated with the stempessary, which, while it remained in its place, of course retained the uterus in proper position, but during menstruation, it became necessary to remove it, thus failing to accomplish the desideratum.

Having become acquainted a short time before with the instrument invented by Dr. Banning, and examined the variety of forms of his "balance," and their adaptability to different abnormal positions, I concluded to try it, and accordingly selected the one which seemed most applicable to the case in hand.

The first object in all cases of uterine flexion is, of course, the restoration of the organ to its natural attitude, and the maintenance of it therein to enable the relaxed and disordered tissues to recover their tone and contractility, so that when the instrument is removed, the uterus will preserve its natural position. No form of instrument can be relied upon for the *permanent and radical* cure of the disorder, but as the restoration of the position of the organ is the first and essential performance, the choice of the most available form of instrument for this purpose is a matter of much importance in each case.

In the case under consideration it was found necessary, after a brief trial of that part of the apparatus which lies within the vagina and supports the fundus in its natural position, to change its curve, so as better to adapt it to the relaxed parts, and make a more direct pressure upon the uterus itself. The substance of which the stem of the "balance" is made, (hard rubber,) enables this to be done with very little trouble, so that after a short trial the arrangement was well adapted to the circumstances of the case. Aided by the external supporter, to which the internal balance is attached, and by it kept steadily in place, my patient was enabled to exercise herself by walking and riding in a gentle manner, and thus materially aid in the restoration of her general health, which had been for a long time much depressed.

The final result has proved as satisfactory as could be desired. After about six weeks' continued use of the instrument, occasionally interrupted by the necessity of its temporary removal for the purpose of applying astringent and soothing injections, the uterus was found to be completely restored to its natural position, and maintained it completely for a fortnight, subsequent to the removal of the instrument, at which time the patient left for her home, with confidence in its continuance.

Injections of tannin in solution, when the parts were most relaxed, and applications of oxide of zinc, dissolved in glycerine, (3j. to the f. ʒj.,) by means of tampons of cotton, to relieve the inflammatory tendency, had the effect desired, while the internal administration of tonics and ferruginous preparations so far restored the patient's general health, as to enable her to take full exercise of body, without any fear of a return of the original trouble.—*Medical and Surgical Reporter.*

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*Amblyopia, Amaurosis, and the Extraction of Cataract.* By  
LAURENCE TURNBULL, M. D., Philadelphia.

This translation was made during the past winter, for the Boston Medical and Surgical Journal, and is now collected from its pages. Its publication is stated by the translator for the twofold object of introducing Albrecht Von Græfe to the American medical public as a clinical teacher, and of exhibiting the progress which has been made in the exploration of one of the most obscure departments of ophthalmic science.

These lectures were compiled and reported by Dr. Engelhardt, and were translated from the *Klinische Monatsblätter für Augenheilkunde* for 1863 and '65. From our earliest attempts to master the subject of ophthalmology, these terms amblyopia and amaurosis have constantly stood in our way, as being arbitrary and used by all writers on diseases of the eye to express loss or defects of vision, and when the ophthalmoscope was brought into practical application, we trusted with others that these indefinite terms would pass away, and give place to terms of a more positive nature. But alas! the day has not yet come, for the recognized head of this department, as late as 1865, employs the same vague and uncertain terms, and thus writes and lectures upon them to students from every part of the world.

"In cases of amblyopia, (obscurity of vision—from which class we, of course, exclude all those affections which proceed from visible changes in the *refractive media*, or in the *internal structure* of the eye, as also cases of *neuroretinitis* and *embolia*) three things aid us in general in arriving at our conclusions. First, the *functional state* of the eye carefully considered; second, the *appearance of the papilla*; third, the *manner in which the affection* has become developed. Ordinary daylight is insufficient to detect slight defects in making a general examination of the periphery of the field of vision. This is to be conducted in a darkened room where the light proceeds from a graduated lamp, and a diaphragm being set at 100, and a black paper, without gloss, being held before the patient, (of course, at a fixed distance,) the limits of the field of vision are ascertained by means of white balls set on a black rod, and gradually removed from the point of fixation."

According to our author, the ophthalmoscope has determined that there are defined bounds to the class of amblyopic affections, by the exclusion of other intra-ocular diseases, and that there are four characteristic diagnostic points obtained by its use: *a*, alteration in color (of the optic nerve); *b*, opacity; *c*, excavation, and *d*, diminution of the calibre of the vessels. In the curative form, the papilla retains its delicate, semi-transparent color.

The following causes are given as producing this affection: The immoderate use of alcoholic liquors, frequent indulgence in strong cigars, pelvic obstructions, catamenial derangements, cold extremities, suppression of habitual hemorrhagic discharges, or of pathological or physiological secretions, venereal excesses, irregular sleep, and immoderate use of the eyes, sometimes exert a separate, sometimes a combined effect, and it is then difficult to assign each their part.

His treatment of a case of congestive amblyopia, with normal

field of vision, is as follows: The use of alcoholic beverages must be given up, that of tobacco reduced to a minimum, regularity in diet and sleep. Local depletion, a rapid evacuation of blood by the leech of Heurtetoup, or by cupping in the neck. In hemorrhoidal affections, leeches to the anus, and in disorders of menstruation, cupping on the inside of the thighs. His diaphoretic treatment is principally (in imitation of many older practitioners) carried out by means of the decoction of Zittmann and the Roman or Turkish baths of dry heat instead of vapor. Abdominal disorders are treated by the use of the mineral springs of Marienbad, Kissingen, Homburg, and Carlsbad. Good and regular sleep must be had, and affords the most grateful refreshment to the active nerve of vision.

Having thus given what we consider the most interesting and instructive epitome of the author's views on the subject of amblyopia, we shall pass to the consideration of amaurosis. The course of the most desperate form is as follows:

"Slowly, but not regularly so, in the course of months or years, the field of vision of the first eye becomes contracted, (generally irregularly, laterally,) its acuteness of vision diminishes, atrophic degeneration of the papilla takes place, and the organ is lost, while after the first eye has begun to be affected, sometimes not till after its entire loss, the second commences to run the same course. These cases are indeed utterly hopeless; they are regarded as a *noli me tangere* by the experienced physician, who cautiously refrains from active treatment, knowing that this may easily harm, and at the best can be of little service.

A few remarks may be added, on the nature of amaurosis. Where there are no objective intraocular symptoms in cases of impaired vision, we are apt to speak of cerebral or spinal amaurosis. Especially interesting is the connection of progressive amaurosis with paralysis and mental alienation—the course of the degeneration is from the vertebral column toward the interior of the skull. Of all the many cases of spinal amaurosis, (forming as they do, some thirty per cent. of the graver forms of progressive amaurosis,) which has come under Von Græfe's observation, he can recollect but two instances where the disease progressed in an opposite direction. It may be regarded as a fixed fact that there is no question of an inflammation of the nerve connective tissue, in the ordinary sense of the word, in amaurosis or tubes dorsalis. By the ophthalmoscope it is found that in the optic papilla there is either simple loss of substance, (atrophic excavation,) the most perfect type of a true atrophic process; sometimes there occurs a gradual consolidation of the connective tis-

sue, the papilla growing smooth, white, and opaque, while the lamina cribrosa becomes hidden.

Having given his treatment of a case of congestive amblyopia, we shall now give an abstract of his treatment of a case of progressive amaurosis, depending on atrophy of the optic nerve.

It is simply necessary to state that all powerful derivative agents, cathartics, searons, mercurials, diaphoretics, and depletives, beneficial as they may be in cases of congestive amblyopia, (Case 1,) are here decidedly injurious. In the average of cases of progressive atrophy, the best means of retarding its progress consists in a mild tonic course—small doses of an iron salt, and tonic baths, milk and whey diet; in other words, a nutritious, but not stimulating diet, good air, a moderate course of cold bathing, and carefully regulated amount of light. Cases 3 to 8 are interesting and also instructive, and are well worthy of perusal, but our want of space prevents us from entering even upon an abstract. In concluding this part of our subject, we may state that the terms amaurosis and amblyopia are merely symptoms of diseased eyes. The true typical symptoms are a diminution in the acuity of vision, (s) and should be carefully investigated by test types, optometer, by concave and convex glasses, and the ophthalmoscope.

[TO BE CONTINUED.]

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*Transfusion in Anæmia.* By W. W. MYERS, M. D., Pittsburg, Pennsylvania.

February 5th, 1866.—Was called to see Henry, son of Wm. M., æt. five years, of Wineberry alley. Found him suffering with vertigo, faintishness, palpitation, and an impaired action of the organs generally; especially the stomach and bowels; digestion being deranged, with flatulency, constipation, etc. The face, the hands, and the general surface were pallid, and slightly waxen or icterode in their hue, clearly indicating the presence of general anæmia. Upon auscultating over the pulmonary and subclavian arteries, a bellowing sound was distinctly perceived, which is to be attributed to a certain diminution in the proportion of the globules. This is due to an impoverishment of these globules, inasmuch as it is not heard when the fibrin alone is diminished in

quantity. The patient had been treated for some weeks previously for hepatitis, but the existence of such I was unable to detect. He was placed upon ferri pulvis, of which grains three were taken thrice daily, *after meals*, because, as every one knows, the gastric juice of the empty stomach is *alkaline*; during digestion it is *acid*; this acts favorably toward dissolving the iron, while the other renders it inert. A small allowance of wine was permitted, and a generous diet advised.

No apparent improvement having taken place by March 27th, the following was determined upon. Having taken some six or eight ounces of blood a few days previously, from a healthy male laboring under plethora, and this blood having been preserved from contact with atmospheric air, it was decided to transfuse a part of it into the patient. Every thing being in readiness, the median basilic was freely displayed, and an incision made down to an inch in length; a probe was then passed beneath it, at the lower part of the incision; a small opening was then made in the vein, immediately beyond the probe, of sufficient size to admit the beak of the syringe—which having been previously warmed—was filled with this blood, it also having been heated to a temperature of about 95°. It was inserted, and 3 iij. injected; it was refilled, and repeated. This quantity was deemed sufficient, for in the extreme feebleness to which the vital action of all the tissues is reduced in cases of protracted anæmia, it is desirable that the supply of blood should be very gradual, lest the action of any vital organ should be impaired by a sudden congestion of its tissues. The greatest possible caution was exercised to prevent the entrance of atmospheric air into the vein, the smallest quantity of which would prove destructive. The expression of the countenance and state of the pulse were carefully watched, but no untoward symptoms arose. A compress and bandage were placed over the orifice, and an opiate administered. The following was ordered:

R Ferri subcarbonas, 3 iiss.  
Ferri phosphas, 3 iss.  
Magnesia carb., 3 ii.  
Sodii chlorid., grs. lxx.  
Cretæ prep., 3 iii.  
Aque, f. 5 ii.  
Mix.

Of which a tea-spoonful was taken thrice daily.

Under this treatment the patient regained his former stamina, and was discharged on May 9th,—*Medical and Surgical Reporter*.



## EDITORIAL AND MISCELLANEOUS.

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### CONTRIBUTIONS TO MEDICAL SCIENCE.

Nothing more useful presents itself to the physician, in the whole range of medical investigations, than the study of medicinal agents—their properties and applications in the treatment of disease. They should be studied, not with the view of finding a *specific* for the cure of a particular ailment, irrespective of the properties they possess, or the organs upon which they act, but directly in reference to the parts they affect and the character of their action. It is to the busy practitioner, thus training himself to investigation, and not to the closeted theorist, that we must look for useful, practical improvements in therapeutics.

Some agents, in constant use for half a century, have newly-discovered properties, which serve, not only to explain their *modus operandi* in the empirical treatment of certain affections, but to give them a wider range of application. From the numerous indigenous plants by which our fields and forrests are covered, additions may be constantly made to the regular classes of *Materia Medica*.

We are pleased to find articles upon the therapeutic effects of certain remedies, frequently sent us for publication. In this way discoveries become valuable to physicians generally, which otherwise would lie still-born to the profession.

Investigations, by which the properties or effects of remedies are determined, we think, should be made cautiously; and as the change in symptoms, following the use of any particular article, should not always be attributed to its action, without frequent tests bearing upon the same point, it is well to preserve and publish the notes of several cases faithfully recorded during their progress. In this way the reader is enabled to form his own con-

clusion in regard to the amount of effect justly attributable to the action of any particular remedy.

To the importance of faithfulness in making reports, it is scarcely necessary to allude, since no one laying claim to the least respectability in medicine would wantonly mislead by erroneous reports.

To the busy practitioner, then, we would say, make our Journal the medium of communicating your experience in matters interesting to the profession, though you have not time to write elaborate articles. Few words sometimes establish important truths.

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At the recent Annual Commencement of Atlanta Medical College, the following Address to the Faculty, which had been previously prepared in accordance with a resolution adopted at a meeting of the Graduating Class, was read by A. H. Brantley:

GENTLEMEN:

Profoundly grateful for the cordial kindness and deep interest which you have, through all the onerous duties of the present session, so continuously exercised towards each and every one of us, we, as a Class, are desirous that no opportunity shall escape us of assuring you of our highest esteem and appreciation.

In taking leave of you, we feel that we are going away from those who have been our friends indeed, and your memories we take with us as precious jewels saved from the gulf that *must* soon claim to-day.

This continued kindness on your part has filled our hearts with grateful feelings of respect and esteem that *must* defy the corroding hand of time.

You have led us to the threshold of the grand Temple of Science, and with feelings of awe and thrilling wonder we gaze upon its stupendous proportions. You have pointed out to us the vast, the illimitable field that lies before us, and with hopeful, cheering words you send us to the harvest. If our labors are crowned with honorable success, the laurels belong not to us, but to you.

Our Alma Mater buckles on our armor and bids us God-speed in the struggle of Life, and for her sake, we, this day, pledge ourselves, and the best energies of our lives, to bear aloft, for the cause of humanity, the proud Banner of Science which she has placed in our hands.

We trust that we are fully alive to the exigencies of the new era that is dawning, and that we properly appreciate the heavy responsibilities devolving upon us.

That there are difficulties before us, we know. Mountains, dark, and rough, and rugged, that have daunted many a brave spirit, and defied the accumulated wisdom of ages, lift their wild, craggy cliffs before us, and cast their gloomy shadows athwart our pathway, but by the clear light of those truths which you have so faithfully, and at the cost of so much valuable time and labor, endeavored to inculcate in our minds, we hope to pass those dizzy heights and open up the way to *greater* and *grand*er results that *must, ere long*, burst with their wonderful brilliancy upon the scientific world.

In parting with you, we earnestly beg to *assure* you that nothing exists in the heart of *any* student of this Class that can ever mar the memory of our relations as teachers and students. Long years from to-day, when our brows are marred by the ravages of time, and some of us are sleeping away back, among the green hills of the past, our hearts will swell with emotion as we gaze on these sacred walls through the mists of those weary years, and we will murmur then as we murmur now: "May God bless the Faculty of the Atlanta Medical College!"

MEDICAL CLASS.

Atlanta, Ga., August 28th, 1866.

J. A. HUNNICUTT, Chairman of Meeting.

J. L. M. HARDMAN, Sec'y.

A. H. Brantley, (Chm'n,) Julius O. Sosnowski, S. S. Smithwick, Wm. O'Daniel and M. Edwards, *Committee*.

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In response, Professor Alexander Means made some pathetic remarks, and afterwards read the following original lines:

On this bright gale-day, busy memory sweeps  
Upon broad dusky wing; the exuberant past  
Numbers twenty-three months, and looks down on the heaps  
Of a war-ravaged city, just breathing her last.  
O God! what a vision glares red on the eye,  
As earth-rocking thunders roll death through the streets;  
And millions of capital melt in the sky  
As flames lash her buildings in wild, livid sheets.  
Pandemonium shouts through her sulphurous hall,  
'Till the revel, infernal, re-echos through Hell;  
And the great Master Spirit, responds to the call,  
That invokes his black curse over mountain and dell.  
But enough—there's a chapter of carnage and blood,  
That shall glew in red letters on history's page,  
And shall rival the records of fire and flood,  
That have scandal'd a Nero's and Attila's age.  
The Demon of War had scarce quitted his prey,  
And a conquering army its plunder and lust,  
Its cataract roar had but just died away  
Over bomb-shatter'd buildings, now crumbled to dust,  
When thousands who fled from their blazing abodes,  
To seek among strangers, a covert from war,  
Look'd longingly back o'er the blood-clotted roads,  
And their courage re-plum'd under hope's guiding star.  
From the North, South and East, the worn refugees come,  
And the West pours her quota of dust-cover'd throngs;  
Each sweeps o'er the ruins of his once happy home,  
And appeals to high Heaven to avenge all his wrongs.  
Full-soul'd and harmonious, they rush to new toils  
And tax earth and air, sea and sky, for supplies;  
And though myrmidon legions had gorged on her spoils,  
They swear by their manhood, "Atlanta shall rise."  
'Twas a struggle of giants that knew no recoil—  
From morning till midnight resounded their blows—  
The ingathering thousands no dangers could foil,  
Till the white-flag of triumph in glory arose.  
Old Balbec and Luxor for ages have slept,  
Redeemless and time-worn, and shrouded in gloom;  
O'er their huge broken columns the serpent has crept,  
And the yells of the jackall have sounded their doom.  
But the deathless "Gate City," though crushed by the tread  
Of militant millions and thundering trains,  
Has rent her own windings-sheet, burst from the dead,  
And the new pulse of life gushes warm through her veins:

Hail! hail! ye proud piles of undying renown,  
 Your numbers shall swell as the ages roll on;  
 And your sun-lighted summits in grandeur look down  
 On the penitent gazers thy fame shall have won.  
 Fair Queen of the mid-lands, thy reign shall extend  
 From mountain to sea-board, where commerce is found;  
 And religion and science in harmony blend,  
 To foster the virtues their bulwarks surround.  
 Thus lighting the landscape and blessing the lands,  
 The next generation thy name shall inspire,  
 To shout on the soil where thy monument stands,  
 That the souls of thy people were proof against fire.  
 Ye parchment'd heirs of Hippocrates, rouse,  
 Your knowledge must quacks and imposters confound;  
 Your fond Alma Mater has laurel'd your brows,  
 And Atlanta shall honor the sons she has crown'd.  
 She has own'd your profession—its temple repaired—  
 Dismantled and torn by the storm that has pass'd;  
 Then build up her fame, with a labor unspar'd,  
 Till her glory eclipses the gloom of the past.

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#### BIBLIOGRAPHICAL.

*A Treatise on Military Surgery and Hygiene.* By FRANK HASTINGS HAMILTON, M. D., late Lieutenant-Colonel, Med. Insp. U. S. A., Prof. of Mil. Surgery and Hygiene, and of Fractures and Dislocations, in Bellevue Medical College, etc., etc. Illustrated with 127 Engravings. New York. Bailliere, Brothers, 520 Broadway. 1865.

This work was, several weeks since, transmitted by the publishers to a party, supposed to be one of the editors of this Journal, who has handed it to us only recently. Hence our failure to notice it at an earlier date.

It is a valuable hand-book for the student of Military Surgery, and a creditable monument of the industry and scientific attainments of its distinguished author.

The chapters relating to the general hygiene of troops, bivouac, accommodation of troops in tents, barracks, billets, etc., hospi-

tals, preparations for the field, hygienic management of troops upon the march, and the conveyance of sick and wounded soldiers, are full of interest, and we know of no work, in which the subjects are so particularly treated.

The chapters on gunshot wounds, in general, and severally of the head, face and neck, thorax, abdomen and of the male organs of generation; on punctured and incised wounds of the thorax and abdomen; on gunshot fractures, amputations, exsections, arrow-wounds, traumatic, and hospital, and dry gangrene, tetanus, scorbutus, and anæsthetics, furnish a valuable compendium of practical information upon these subjects, which we commend to the attention of the earnest student.

The typography, paper and binding are highly creditable to the publishers of the work.

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#### WHY NOT?

*A Book for every Woman.* The Prize Essay, to which the American Medical Association awarded the Gold Medal for 1865. By HORATIO R. STOKER, M. D., of Boston.

A little volume of 90 pages, bearing the above title, has been sent us by the publishers, Lee & Shepard, Boston, Mass.

The essay is intended to call attention, in words of condemnation, to the increasing evil of criminal abortion. We think the work should be in the hands of, not only every woman, but every man, whether physician or not. We have had evidences of a deplorable yielding, on the part of the intelligent grades of society, to the whisperings of their vicious inclinations, and feel gratified in being able to refer to a work on this subject.

The author says:

“An opinion has obtained credence to a certain extent, and it has been fostered by the miserable wretches, for pecuniary gain, at once pandering to the lust and fattening upon the blood of their victims, that induced abortions, are not unfrequently effected by the better class of physicians. Such representations are grossly untrue, for wherever and whenever a practitioner of any

standing in the profession has been known, or believed to be guilty of producing abortion, except absolutely to save a woman's life, he has immediately and universally been cast from fellowship, in all cases losing the respect of his associates, and frequently by formal action, being expelled from all professional associations he may have held or enjoyed.

"The old hippocratic oath, to which each of his pupils was sworn by the father of medicine, pledged the physician never to be guilty of unnecessarily inducing miscarriage. That the standard, in this respect, of the profession of the present day has not deteriorated, is proved by the first of the resolutions adopted by the Convention at Louisville in 1859: 'That while physicians have long been united in condemning the procuring of abortion at every period of gestation, except as necessary for preserving the life of either mother or child, it has become the duty of this association, in view of the prevalence and increasing frequency of the crime, publicly to enter an earnest and solemn protest against such unwarrantable destruction of human life.'"

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WE learn that Dr. Samuel Logan, formerly Demonstrator of Anatomy and Adjunct Professor of Surgery in the Medical College of South Carolina, has been elected to the chair of Anatomy in the Medical College of Virginia, in place of A. E. Peticolas, resigned.

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#### PRIZE ESSAYS

The Committee on Prize Essays hereby invite the attention of their professional brothers to the following resolution, adopted by the Medical Association of Georgia at its last meeting:

"*Resolved*, That the sum of one hundred dollars be hereby offered by the Association for the best prize essays: \$50 for the best; \$30 for the second, and \$20 for the third."

The essays must be written on medical or scientific subjects of interest to the profession, and sent to J. T. Banks, M. D., chairman of Committee on Prize Essays, Griffin, Ga., on or before the

first day of March, 1867. Each essay must be accompanied by a sealed envelope containing the name and address of the author, and having a sentiment or motto inscribed upon it; the same sentiment or motto must also be inscribed upon the essay.

J. T. BANKS, M. D.,

J. G. WESTMORELAND, M. D.,

F. O. DANNELLY, M. D.,

N. B. DREWRY, M. D.,

D. C. O'KEEFE, M. D.,

*Committee on Prize Essays.*

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WE purpose publishing, in successive numbers of the Journal, statistical statements of the deaths occurring in the Army of Tennessee, giving the names and commands to which they belonged, with summaries of the mean strength of the command, and per centage of mortality.

In this number we commence with General Bragg's command at Pensacola, and shall next take up the reports from the Army of Tennessee, under the same and subsequent commanders.

The Editors of this Journal are indebted to Dr. S. H. Stout, Director of Hospitals for that Army, for these reports and their arrangement for publication.

#### LIST OF CONFEDERATE DEAD,

*Furnished by S. H. Stout, M. D., Professor of Surgical and Pathological Anatomy in the Atlanta Medical College, and late Medical Director of Hospitals of the Confederate Army of Tennessee.*

The following lists, as far as they go, are reliable and authentic. Many of the most valuable records of the office of Medical Director of Hospitals have been lost, captured or stolen. I have in possession many loose memoranda, and duplicates of reports, which, by much labor on my part, I hope to be able to collate and put in a valuable form for publication.

To rescue from oblivion the names of our dead braves, to gratify the friends of the deceased, and furnish the future historian of the war with such material as is in my hands, relating to the causes of death in the Confederate Armies, is suggested to my mind as a task, first demanding attention, in consequence of the form in which these records now exist.

These lists of dead will be furnished in the order of time as near as possible. The earliest reports now accessible to me, are those for the months of July, August, September, October, November and December, 1861, in the Confederate States Department of Alabama and West-Florida.



STATEMENT OF DEATHS in the Department of Alabama and West-Florida, commanded by General Braxton Bragg. From the Reports of Surgeon A. J. FOARD, Medical Director, Head-Quarters Pensacola, Florida.

July, 1861.

Thomas Shine, Pvt., Fla. Regt.	W. J. Moore, Pvt., Fla. Regt.
E. M. Harrell, " " "	Joshua Wright, Pvt., 1st Ala.
J. W. Cox, Pvt., 9th Miss.	A. J. Cohen, Pvt., 1st Ala.
H. R. Hawkins, Pvt., 7th Ala.	John Seeley, Pvt., Fla. Regt.
F. R. Moulton, Pvt., La. Inf.	H. P. Morgan, Pvt., 1st Ala.
Morris Hurty, Pvt., La. Inf.	J. B. Sheffield, Pvt., 7th Ala.
John Hill, Pvt., 1st Ala.	— Collins, Pvt., 10th Miss.
James Hardee, Pvt., Fla. Regt.	J. S. Bishop, Pvt., 7th Ala.
E. Mixon, " " "	John Milton, Pvt., 1st Ala.
M. Kelly, " " "	James Pew, Pvt., 1st Ala.
George Romberg, Pvt., 10th Miss.	Fabius Newlan, Pvt., 10th Miss.
John Bossert, " " "	E. T. Benoit, Sgt., " "
Joseph Graham, " 1st Ala.	John S. Crowder, Pvt., Fla. Regt.
J. L. Young, Pvt., 9th Miss.	H. Havard, " " "
James Kerr, Pvt., La. Inf.	Thomas Tate, Corp. " "
— Newsome, Pvt., 1st Ala.	W. E. Dennis, Pvt., Ga. Battalion.
A. Joiner, Pvt., 1st Ala.	

#### RECAPITULATION.

Typhoid Fever, .....	18
Remittent Fever, .....	4
Intermittent Fever, .....	1
Phthisis Pulmonalis, .....	1
Dysentery Acute, .....	2
Dysentery Chronic, .....	1
Rubeola, .....	3
Wounds of Abdomen, .....	2
Diarrhoea, .....	1

Total, ..... 33

#### SUMMARY.

Total cases received during the month, 8881; aggregate, 4125; sent to Gen'l Hospital, 411; returned to duty, 2246; furloughed, 58; discharged, 107; deaths, 33. Remaining on hand at the end of the month, sick, 1070; convalescent, 205. Total remaining, 1275. Strength of command: Officers, 331; enlisted men, 5823. Total strength, 6154.

Rates of deaths per 1000 of mean strength, 5.362.

#### Deaths in August, 1861, at Pensacola and Vicinity.

A. Robinson, Pvt., 10th Miss.	David Ballard, Pvt., 7th Ala.
R. M. Watson, " " "	J. L. Stone, Pvt., 1st Ala.
Riley Earnest, " " "	A. Warmick, Pvt., 9th Miss.
W. H. Hall, Pvt., Fla. Regt.	G. E. Vainig, Pvt., 1st Ala.
R. H. Stephens, Pvt., 9th Miss.	S. H. Raborne, Pvt., 9th Miss.
A. Coleman, Pvt., La. Inf.	James Coburn, Pvt., 1st Ala.
Patrick Murphy, Pvt., La. Inf.	W. G. Hines, Pvt., Fla. Regt.
A. J. Williamson, Pvt., 1st Ala.	B. Warren, Pvt., 1st Ala.
S. P. S. Crockett, Pvt., 9th Miss.	Stephen Underwood, Pvt., La. Inf.
J. T. Harris, Pvt., 7th Ala.	— Scroggins, Pvt., 7th Ala.

J. D. Rawls, Pvt., 7th Ala.	— Gammen, Pvt., 1st Ala.
William Porter, Pvt., 1st Ala.	J. C. Newberry, " " "
J. B. Phillips, Pvt., 7th Ala.	Bryant Bates, " " "
— Pettibone, Pvt., La. Inf.	T. J. Lawrence, " " "
E. L. Clifton, Pvt., 10th Miss.	Charles Sunis, " " "
Moses Norvoy, " " "	Crittenden Coleman, Pvt., 1st Fla.
Green Heath, Pvt., 7th Ala.	R. H. Davis, " " "
William Buchan, Pvt., 1st Ala.	M. Pittman, " " "
William Parris, Pvt., 1st Ala.	Daniel McKenna, " " "
J. B. Rhodes, Pvt., 9th Miss.	R. J. Goodson, Pvt., Prathville Dra-
Mich. Wheelan, Pvt., La. Inf.	goons.
L. S. Rump, Pvt., 1st Ala.	William Wilson, Pvt., 5th Ga.
William Pithman, Pvt., Fla. Regt.	William Dukes, Pvt., " "
John Scott, Pvt., La. Inf.	Michael Whalen, " " "
S. W. Alexander, Pvt., 7th Ala.	W. H. McMullen, Corp., 10th Miss.

## RECAPITULATION.

Typhoid Fever,.....	85
Febris Continua Communis,.....	2
Pneumonia Typhoides,.....	1
Rubeola,.....	2
Dysentery Acuta,.....	6
Dysentery Chronica,.....	1
Suicidium,.....	1
Vulnus Punctum,.....	1
Total,.....	49

## SUMMARY.

Total cases received during the month, 3200; aggregate, 4475; sent to Gen'l Hospital, 340; returned to duty, 2558; furloughed, 813; discharged, 189; deserted, 7; died, 49. Remaining, sick, 575; convalescent, 394. Total remaining, 969. Mean strength of command: Officers, 369; enlisted men, 6271. Total mean strength, 6640.

Rates of deaths per 1000 of mean strength, 7.379.

*Deaths in September, 1861, at Pensacola and Vicinity.*

Albert Russell, Pvt., 7th Ala.	E. B. Whitley, Pvt., 9th Miss.
Wiley Ludley, " " "	J. H. T——, Pvt., Ga. Batt.
J. A. Caperton, " " "	E. J. Whitehurst, Pvt., 7th Ala.
J. Dowling, " " "	James Ford, Pvt., 7th Ala.
J. H. Hamilton, " " "	W. J. Bryant, Pvt., 7th Ala.
J. Ryals, Pvt., Fla.	Thomas Maynard, Pvt., 7th Ala.
Thomas Cox, Pvt., 9th Miss.	H. O. Ingols, Lieut., 7th Ala.
Otto Wonder, Pvt., Ga. Battalion.	W. H. Willis, Pvt., 9th Miss.
J. Clarke, Pvt., La. Inf.	W. J. Walea, Pvt., Ga. Batt.
Richard Darby, Pvt., 9th Miss.	M. V. Wills, Chaplain, 9th Miss.
J. D. Lipscomb, Pvt., 7th Ala.	N. W. Braddy, Pvt., 1st Ala.
S. B. Herr, Pvt., 9th Miss.	Francis Smith, Pvt., 5th Ga.
S. G. Egnor, Pvt., 7th Ala.	F. M. Meddlin, Pvt., Fla. Regt.
T. M. Bishop, Pvt., 9th Miss.	S. O. Satterwhite, Pvt., 5th Ga.
Henry Ming, Pvt., 1st Ala.	G. F. B. Thompson, Pvt., 5th Ga.
D. Walker, Pvt., 2nd L. Artillery.	John Sidney, Pvt., C. S. Marines.
W. M. Bounds, Pvt., 7th Ala.	

## RECAPITULATION.

Febris Typhoides,.....	21
Febris Continua Communis,.....	2
Dysenteria Acuta,.....	4
Pneumonia,.....	2
Pneumonia Typhoides,.....	1
Rubeola,.....	1
Gastritis,.....	1
Vulnus Sclopeticum,.....	1

Total,.....33

## SUMMARY.

Received during the month, 2590; aggregate treated, 3559; sent to Gen'l Hospital, 328; returned to duty, 2052; furloughed, 346; discharged, 46; deserted, 6; died, 38. Remaining, sick, 517; convalescent, 281. Total remaining, 748. Mean strength of the command: Officers, 868; enlisted men, 6453. Total mean strength, 6821.

Ratio of deaths per 1000 of mean strength, 4.867.

## RECAPITULATION

*Of Deaths during the Quarter ending September 30th, 1861, at Pensacola and Vicinity.*

Febris Typhoides,.....	74
Febris Continua Communis,.....	4
Febris Remittens,.....	4
Febris Intermittens,.....	1
Phthisis Pulmonalis,.....	1
Rubeola,.....	6
Pneumonia,.....	2
Pneumonia Typhoides,.....	2
Dysenteria Acuta,.....	12
Dysenteria Chronica,.....	2
Diarrhoea,.....	1
Wounds of Abdomen,.....	2
Vulnus Punctum,.....	1
Suicidium,.....	1
Gastritis,.....	1
Vulnus Sclopeticum,.....	1

Total,.....115

## SUMMARY

*For the Quarter ending September 30th 1861, at Pensacola, Florida.*

Remaining from previous month,.....	744
Received during the Quarter,.....	9171
Aggregate treated,.....	9915

ATLANTA  
Medical and Surgical Journal.

NEW SERIES.

VOL. VII.

NOVEMBER, 1866.

No. 9.

ORIGINAL COMMUNICATIONS.

ARTICLE, I.

*Cryptogamous origin of Fevers and other Diseases.* By J.  
M. JOHNSON, M. D., Atlanta, Ga.

The overwhelming importance of this subject commends it to the attention of thinking men everywhere. There is not, in the world, a conscientious physician that has not felt humiliated at the multitude of discordant opinions as to the cause or causes of fever. Men of all capacities, and from various motives, have appeared before the public in the roll of advocates and objectors to the various theories of the day, and have only left confusion doubly confounded, to mark the ground over which they have blundered. The substantial benefit, since the days of Lancisi, in 1695, may be summed up in one word : nothing. Whilst the literature of medicine has been almost hopelessly encumbered with high sounding latin verbs and adjectives, putting it out of the power of earnest men, constantly laboring at the bedside, to keep up with their newly coined names and phrases, too often a cloak for poor opinions. There is everywhere a class of sound, practical, original thinkers, who scarcely leave the field of their labors half dozen months in a lifetime, who are practicing medicine with good success, but who never give to the world the benefit of their experience,

rich in observation, in thought, and especially in results, because they are unaccustomed to the use of the pen, and can not measure terms with a majority of contributors to the various journals.

Amongst this class there are many who have been earnest inquirers into the mysteries of causation, and are to-day laden with rich fruit, which the reasons I have enumerated have prevented being given to the world. A good economist would husband his resources better than this. The farmer applies the waste of his house and barn yard to the failing spots in his field. The financier will not spend his cash in bank, but gather up the odds and ends with which to keep up his household equipage. In violation of this sound policy, shall we commit the true interests and true literature of the time-honored profession of medicine, to wordy authors who write for notoriety, and who deal in hyperbole to cover up a weak argument, or conceal a want of knowledge? Quackery is rampant from one end of the country to the other. These bold *guerillas* derive much of their consequence from the heterogenous mass of opinions, so patent to everybody. Not only in the public journals, but in every neighborhood, where you find two doctors, they seem to make it a point, publicly, to disagree in some of the important details of medicine. This results, not so much from a disposition to play the charlatan, as from the vast contrariety of opinions promulgated under the sanction of great names.

There is a universally known vulgarism—we hear it every day—and alas! it is too true, that “doctors will differ.”

The true dignity and usefulness of the profession will not be reached until there is a boundary fixed to dissention and the endless conflict of opinion. This is not impossible. Suppose we were to memorialize Congress for an appropriation of two hundred thousand dollars per annum, to be applied to the payment of the salaries and expenses of a board of scientific and practical men, to be appointed by the medical societies of the several States, during the term of each Presidential Administration, whose duty it would be to visit every part

of the United States, and make such tests and experiments as would enable them to report upon the medical topography of the whole country; make it their province, also, to report upon all new discoveries, to correspond with and visit active practitioners in the different localities, and collect such medical statistics as will enable them to report upon the true nature and treatment of all of the diseases of the country.

There are in the United States more than fifty thousand physicians: many of them men of eminent talents, social position, and influence. The whole land is interested in medical reform and progress. Not a man, woman, or child but has a deep interest in, and all are dependent upon, and look up to their medical advisers in the trying emergencies of disease and death; and surely an appeal from such a body of men could not be made in vain, to the magnanimity of Congress. Look at the profession of the law: there is not a session of Congress, or of the Legislature of any of the States, that does not enact laws or appropriate money to codify the statutes, and publish the decisions of Courts and acts of their various bodies. Is money and land of more value than health and life? The profession of medicine does as much to promote the great cause of social progress as any of the learned professions, hardly excepting that of the gospel of peace; and in its appropriate sphere, where disease and death visit the hearthstone, and friends are powerless to help, then it is that the faithful physician, with steady nerves and cheerful counsel, dispels alarm, and opens up the boon of hope to the fainting soul.

I have said this much as introductory to the subject. The interesting paper lately published by Dr. Salisbury, in the *Philadelphia Journal of Medical Sciences* for January last, but which did not fall under my notice until a day or two ago, puts a new face upon an old subject. As far back as 1695, Lancisi published a treatise, "*de noxiis paludum effluviis*," which was, so far as known, the first published theory upon the subject of the production of fever by marsh air, although allusion had been made to the subject by some of

the oldest authors. Subsequently, McCullough, of London, and Cragie, of Edinburgh, gave it the influence of their powerful names, and it became the accepted theory of causation everywhere. But the great intangibility of the subject, growing out of the imponderableness of the agent, so baffled inquiry, as to its real character, that finally grave doubts had arisen as to the verity of a theory universally accepted for more than a century and a half, as a finality of the causation of intermittent and other fevers; and, indeed, it is full of difficulties, even admitting the correctness of Dr. Salisbury's paper, to the full extent of his own credulity. Why are not all paludal localities visited by the same endemic and epidemic distempers? In treating upon this subject, I shall depend upon many facts furnished by the late Dr. John Kearney Mitchell, of Philadelphia, whose brilliant pen and benevolent nature have erected a monument to his memory, which I fondly hope will out-live the neglect of friends, or the fame of the "merry andrews" who may attempt to appropriate his opinions and labors.

The hypothesis of the miasmatists, that there was exhaled from swampy low-grounds an organic poison which produced intermittent and remittent fevers, has, by the use of the microscope in the hands of Dr. Salisbury, been demonstrated. Not only does he find the very agent, but gives a description of the plant, and the abnormal bodies exhaled from it, and which, from their minuteness, are capable of absorption by the skin; are received into the lungs by inhalation; swallowed with food and water; organized with the ingesta, and diffused by means of the circulation, poisoning the epithelial surfaces with which they come in contact,—and thus working the morbid changes upon the blood, the nervous centres, and trunks, spleen, liver, kidneys, and skin, so frequently observed amongst those inhabiting ague districts, especially those who are the subjects of ague paroxysms.

In the following pages I shall quote extensively from Dr. Salisbury's paper, and on important points give his own words.

The field of Dr. Salisbury's late discoveries is by no means

new. In every country where the arts and sciences have been developed and cultivated, descriptions of cryptogamous plants abound, showing their diffusion to be *pari passu* with the universe, and their number and variety almost equaling the firmament of stars, or the sands of the sea. Their poisonous properties, and their peculiar seasons of growth, the minuteness of their spores, their love of darkness, and tainted soils, and heavy atmospheres, are, according to Dr. Mitchell, proverbial. For nearly two centuries past, the populace of many parts of Spain believe that mushrooms cause fever. Leger (1775, Vienna) says a mildew fell after thunder showers, which dried and burnt the grass and leaves, and was poisonous for twenty-four hours after falling. Van Eesenbeck believed that mushrooms of the most minute forms had their origin in the air, producing spots and stains, and were the true cause of epidemics. By the use of the microscope Müller discovered that vegetable cells resemble the primordial cells of our own tissues, and inclines to the opinion that these are the true morbid seed.

Dr. Mitchell says, "The mushroom (*fungi*) is equally distant from plants and animals—mere fortuitous developments of vegeto-animal matter, called together by special conditions, and capable of being propagated under circumstances apparently the most contrasted." \* \* \* Of all vegetables, they are the most highly animalized. Like animals, they disengage carbonic acid, and imbibe a quantity of oxygen, and some even extricate hydrogen and nitrogen. Their chemical composition allies them to animal structures. They yield resin, sugar, fungic acid, and a number of saline compounds, and also adepocire albumen, and osmazome of the animal kingdom. By the proper means, they are made to yield several acids and fatty substances, and even wax, tallow, and pure oil.

The two families of plants are distinguished by the generic names of phanerogamic and cryptogamic. The former have organs of generation by which they propagate their species, as wheat, corn, trees, etc., etc. The latter have no organs of generation, and propagate their species by spores. The former



embrace every variety of vegetable life, except the mushroom, lichens, and algae, which are embraced in the generic name cryptogami; and of these, as I have said, the variety is almost endless. They vary in size, from a mere point, requiring the aid of the microscope, to more than thirty pounds weight. Their increase is magical. From a single spore, on the authority of Carpenter, the physiologist, they may grow in a night to the size of a large gourd, and estimated to contain four thousand five hundred millions of cells.

The spore, let it be borne in mind, is the reproductive element. The plant is an aggregation of cells, answering exactly to the primordial cells which make up our own corpus animi. The spores are many times smaller than the cells; but both are so small as to require a microscope of great power to see them. Even the algoid plant, (one of the cryptogami) has to be aggregated to be seen with the naked eye. This is also called palmella, by Dr. Salisbury, who, in his classifications and names, has "darkened council by words." His latin verbs and adjectives will read badly anywhere out of America.

To the several forms of this type (*palmellæ*), he has given the generic name of *Gemiasma* (earth miasma): each of the type having cells consisting of a thin outside wall, and enclosing an inside cell, filled with minute spores, and enclosed within a parent membrane. They are of all colors. Most of this species (*palmellæ* of the algoid type) act as malarious poisons. The brick-red, green, and lead color, are principally found upon rich calcarious soils; while the greenish-yellow, and white, are found mostly upon non-calcarious soils. The red, resembling brick dust, sprinkled over the soil, produces intermittents of a congestive type. In all of these is found minute spores, in almost incomprehensible multitudes, that have escaped from the plants beneath; and these, the most minute of all known organisms, are elevated at night, with the earth exhalations.

The palmella, or poisonous cryptogam, is the variety to which attention is mainly called. It abounds in bogs and

low grounds; but not alone in these. It exists in all alluvial and limestone soils, and in the standing ponds and pools everywhere. It is vulgarly known as green moss, where it appears in ponds or sluggish streams. Its generic name is alga. The poison resides, not alone in the cells, but in the spores also. These being much more minute and imponderable, may pass through the skin, and enter the systemic circulation. It is questionable whether the cells do this; but there is abundant means through the lungs, and in food and water, for them to enter the system. The alga is not particularly noxious, except during the process of dessication. When the water has dried up, leaving the alga, and other aquatic products of a cognate nature, on the muck, and exposed to the hot sun, the process of dessication develops the plant in the new phase I have mentioned, and gives off its spores and cells through the medium of cool humid exhalations from the poison locality, in such immense quantities, as to be seen by the naked eye, having the appearance of mist or fog, and presenting a well defined zone, supported by an atmosphere of greater density than that surrounding and above it. Within this zone is contained the "miasma," "malaria," "morbid agent," "morbific cause," or the "*de noxiis palludum effluviis*" of Lancisi, described more than a century and a half ago by many of the old writers.

This zone, with its accumulated poison, more so if possible, than the fabled pandora's box, may be driven by winds to distant and healthy locations, and produce its legitimate fruits where it has never before been felt. It may rise, according to Dr. Salisbury, from thirty-five feet to more than one hundred, and be driven by winds east, west, north, or south; but as the atmosphere gets dry, and as its coolness and density is lessened, it settles to the ground, and remains innocuous through the day, to be exhaled again at night, and recommence its routine of mischief.

The insolubility of the night air has been proverbial in all latitudes. It has been denied by some writers, but affirmed by an overwhelming majority. Dr. Lind, on the

authority of Dr. J. K. Mitchell, says that sixteen of the crew of the British sloop, *Phoenix*, went ashore at the island of St. Thomas, on the coast of Africa, and spent the night, and all but two died of the African fever. The remainder of the crew, two hundred and eighty men, went ashore in the day time, and returned at night to their quarters on ship-board, and not one was even sick, although they went where they pleased, washed their clothes, etc. The same is true of the crew of the *Hound*, who went ashore every day, had their field sports and amusements, such as fishing, etc., and returned at night to the ship, and not one died from any cause. The same author speaks of a settlement of French protestants in a paludal part of Florida, where most of them died. They were visited by eight gentlemen from a healthier place, who spent one night; every one of these was attacked with intermittant fever, and two died. Seven other gentlemen came the next morning after the first party had arrived, and spent the day only, and left before night, and not one was attacked.

Dr. Hunter, of Jamaica, relates many such cases. In one instance, out of sixty or seventy persons sent ashore for water, and who were exposed to the night air, not one escaped fever, while the rest of the crew enjoyed good health.

Dr. James Johnson remarks, that while cruising, or lying at anchor between Batavia and Malacca, every man who went ashore at night died.

Tratter, speaking of the same coast, says: "Every man who slept ashore died, while the rest of the ship's company remained remarkably healthy." Dr. Evans, writing from the unhealthy island of St. Lucie, says: "The sportsman wades through the stagnant waters and mangrove bushes, which cover the surface of the fens, with impunity, through the day, but places himself out of reach of the poisonous effluvia long before sun-set."

Mr. Webb says the British army was almost annihilated at Walcheren, while those on ship-board and out of the night air, escaped entirely.

Robert Armstrong says the same thing of the West Indies, South American coast, and South Pacific Islands.

Many localities in the Southern States are equally pestilential at night. To sleep one night in certain localities in South Carolina, Florida, Georgia, Alabama, Louisiana, etc., etc., will place in jeopardy the life of any unacclimated person, whilst day visits are unattended with danger.

The Danes, I believe, were the first to require scientific observations and reports from their exploring squadrons. This policy has been adopted by every maritime nation of the earth. There is not a continent or an island that has not been thus visited, and contributed its share to the wonders of this wonderful world. In one thing, at least, all agree: that on the coast of Africa, the West Indies, North and South American, and Indian coast—in short, every continent, and every island that dots the ocean—where malignant endemic fevers prevail, the night alone is surely fatal to the unacclimated constitution.

In vain do we search, says Dr. J. K. Mitchell, “in the works on received theories, for the cause of this curious influence of night. It is in the day-time that evaporation goes on most rapidly, and that chemical changes, produced by both heat and light, are in most active operation. The water is warmer, the common vegetation more vivid, and the great chemist, the sun, is urging on the process of the laboratory of nature. This is, of course, admitted by many writers, some of whom confess manfully this part of their subject, while others suppose that the miasm evolved during the day descends during the night. Were this so, it would scarcely account for the difference in the disease producing power between the night and day.” Dr. Mitchell is of opinion, that the devevelopment of cryptogams at night explains the analogy between malaria and these plants.

He says: “It is in vain that we search in the latter part of the day for young mushrooms. It is only in the early morning that they are found in their prime and abundance.” “A field at evening, exhibiting not a single plant, is often white with them in the morning.”

Comstock says: "They spring up almost everywhere, especially amongst decaying substances, and that thousands of them may be seen in the morning, where none existed the evening before." At what time the water cryptogams grow, can only be judged of by the habits of the cognate varieties we have been considering. Whether the green moss of stagnant pools, (algæ, confervia, etc.,) or the algoid plants of calcarous and peaty soils, which are closely allied, grow exclusively at night, like the mushroom, is a question only for the curious, and in no way affects the great question of their agency in the production of fever. As the water evaporates, the algæ is left upon the muck to dry. By the time dessication is complete, the algæ has disappeared, and the minute palmella takes its place under a new organism, with increased power of propagation and mischief. Both of these, according to Dr. Salisbury, take place at night. The process of fructification, during the period of darkness, is only equalled by the rapid exhalation, through the medium of the cold humid atmosphere of night.

Dr. Mitchell is of opinion, that these plants have electrical relations that aid in their growth and dissemination; and Hansinger alleges, according to the same authority, that "they have a polarizing membrane, and consequently electrical relations to the polarized vesicles of marsh mist, imbued with moisture, enriched by the humid exhalations, and screened by the shadows of night. These may form the most fruitful floating soil, for the invisible cells of the cryptogami, so that from the damp earth, or the nebulous air, or both, may come out to propagate disease, the cells of an anomalous vegetation."

Dr. Mitchell says again: "That almost every mineral, however poisonous, supports a peculiar cryptogamous vegetation. \* \* \* Fungi grow in everything." Haller declares the *Ag Piperatus* is poisonous in France, but esculent in Russia. Another kind, an intoxicating food in Siberia, becomes a deadly poison in the south of Europe. The best varieties become unsafe after prolonged rains in France; and I have the authority of Col. Dobbins, of this city, for saying

that they are poisonous to hogs in long wet seasons. Boiling water fails to destroy them : the acids and caustic ammonia are equally impotent to do so ; and they sustain the cold of solid carbonic acid without abating their productive power, (*Cognare de la tour*).

But there is still another phase of cryptogami, if possible, more interesting than the history of the plants just given. The mould, which all have, perhaps, at some time of their lives, observed upon the walls of the house, all articles of leather, and sometimes the furniture, and even clothing, is of the class of plants we have been considering, and is a phenomena of ill omen to those in contact with it. It has been known to herald the advent of epidemics and endemics of the most fatal character.

Dr. Mitchell says : " Not only are common moulds more common on such occasions, but there often appears new and unusual productions of this kind. These moulds are chiefly red, but sometimes white, yellow, gray, or even black.

They appear, in an incredibly short space of time, on the roofs of the houses, on the pavements, on the clothes, veils, and handkerchiefs of women, on wooden and domestic utensils, and the meats in the larder. Even the depths of cellars, and the inmost recesses of chests and cupboards are invaded by a blood-like mould, which filled the observers with disgust and horror."

The presence of mould, and the rapid decomposition of vegetable and animal substances, the vast increase of insect life, seems to have a common cause in epidemic meteoration (Smith). Cragie observed this tendency in vegetable and animal matters to immediate decomposition, and attributed it to a " febriferous state of the atmosphere, displaying its insolubility, not only upon the human race, but on the vegetable world, and dead animal and vegetable matter."

Plutarch, in his life of Romulus, says : " During the great plague at Rome, it seemed to rain blood." In the sixteenth century, during the great sweating sickness that prevailed over the continent, there appeared a blood rain at Cremonæ. During a like disease in England, near the same time, the

lowest order of cryptogami went hand in hand with the pestilence. A mould, like unto turbid dew, was cast upon every object, in the third century, having the appearance of gore, attended by a plague that swept off half the human race in fifteen years—(Eusebeus). In 1813, in the island of Malta, on the 14th of March, light showers were experienced, attended with a reddish mould. In April, the plague commenced, which nearly depopulated the island. During the pestilence at Naples, in 1660, curious mould spots appeared on the garments. And in that of 746, at the same city, mould spots appeared in the form of a cross upon the clothes of the populace—(Boyle). In 1502, the pestilence drove the people from Brussels for a period of three months. Upon returning, they found the roofs of their houses covered with mould, (Webster).

During the pestilential season of 1795, in New York, cabbages and different kinds of fruits were destroyed by the mould. Cherries did not come to perfection; and apples fell a month before their time: and those which came to maturity could not be preserved—(Bailey). Webster says the air of New York produced astonishing effects in the way of mould. Garments were spotted in a single night, pavements and utensils were covered, and carefully closed desks invaded by it. In Africa, the rains and sickness commence together; and the mould is so fearfully developed, as to rot the clothes and shoes in one or two days. In 1823 and 1825, during the epidemics of yellow fever in Natchez, Dr. Cartwright noticed an extraordinary mould: shoemakers complained that their leather and materials rotted, although there was no unusual dampness in the atmosphere, (Mitchell). In 1832, during the prevalence of cholera in Philadelphia, Dr. Mitchell noticed a splendid vermilion colored mucor, that covered paste, starch, and other vegetable preparations, never observed before or since.

I have witnessed two epidemics of erysipelas. In the fall of 1848, in the county of Crittenden, Ky., the leaves and grass became parched a month before the usual time, fruit fell, rotting from the trees, and vegetables perished in

the garden. In November, a grayish dirty mold made its appearance on clothing and wooden articles, in the houses of the village and the surrounding country, which continued all winter. Simultaneously with it, the erysipelas made its appearance, generally attacking the throat, but not unfrequently the nose, face, scalp, ears, toes, fingers, arms, hands, feet, or legs. The lungs, liver, spleen, and peritoneum were frequently the points of attack; and during four months, not an obstetrical case survived in the locality where the disease prevailed.

In phlegmonous cases, gangrene generally set in, in an hour or two after the attack. Death not unfrequently occurred in one or two days, from congestion, strangling, or mortification. Nearly one-fourth of the cases died. Recoveries were generally slow, and, in many instances, attended with painful abscesses and whitlow, and with loss of hair, and finger and toe nails. The disease continued the entire winter, during which time there was a great amount of rain, and very little snow or cold weather. I have reason to believe, that erysipelas, and certain forms of sweating fever, of a most distressing type, are not unfrequently produced by eating bread made from diseased wheat, rye, and corn. It is known, that all of these cereals, some one of which enter into the daily food of the whole human race, are liable, under certain meteorological conditions, not well understood, to visitations from an army of cryptogams. When once grain is poisoned by them, no culinary process can render the bread harmless. Yeast may increase the deleteriousness of such food, by imparting new life and a new existence to the inchoate plant.

The history of epizootics shows examples of destructive diseases brought upon the lower animals by mould.

The angina maligna, the milzbrand, both gangrenous diseases; the foot evil in horses, with a multitude of febrile and eruptive diseases, are all capable of being conveyed, not only to other animals of the lower grade, but to man, also. The malignant pustule of sheep and cattle so poisons the pelts of those animals, that even tanning them into



leather does not destroy it. The wool of sheep thus diseased, although cleansed, and woven into cloth, still retains the poison, and is capable of reproducing the disease, (Mitchell, Badham, Bayer). There is scarcely a doubt, but that milk-sickness has its origin in cryptogamous poisoning. A species of the fungi has been known to produce symptoms in some of the lower animals analagous to trembles, as the disease in the lower animals is called.

Just at the point where the miasmatists have stopped their investigations of the subject of the causation of fever, Dr. Salisbury commences his. His discoveries consist in finding in the expectoration of those affected with chills, certain double, oblong, nucleated cells, never before described. In the atmosphere of the adjacent ague levels, he found like cells, and numerous other abnormal bodies.

By the aid of the microscope, he discovers in the morning expectoration of chill subjects, certain zoophitic (zoosporoid?) cells, animalcule bodies, diatones, (?) dismidæ (?) algoid cells and filiments, and spores. But the most constant bodies found, are the minute oblong cells, both single and aggregated, and consisting of a distinct nucleus, surrounded by smooth cell wall, with a highly clear and apparently empty space between the outside cell wall, and the nucleus.

He next procured a number of glass plates. These he placed horizontally, twelve inches above the stagnant water, on four pegs, after sundown, and upon returning in the morning, found the under surface covered with the condensed vapour. To this he applied the microscope, and discovered innumerable cells, but very few of them answering to the description of the double oblong cells, found in the saliva of chill patients. Upon examining the top of the glass, he found them in multitudes. These cells, he thinks, are not fungoid, but of the algoid type, and evidently belonging to the palmellæ. By an after contrivance, he collected great quantities of these cells from the atmosphere, at various hights, the maximum being over one hundred feet above the nidus at Memphis and Nashville, and from thirty-five to sixty in the State of Ohio. He thinks he has

demonstrated the identity of the cells on the top of the glass plates and in the atmosphere with those found in the morning expectoration of chill subjects; and by inference, reaches the conclusion, that these cells have an affinity for the epithelial surfaces, which they reach by inhalation, and are swallowed with the saliva, food, and water. That their absorption by the skin and mucous surfaces brings them in direct contact with the epithelial cells spread over, and covering the entire body, both internally and externally, through all the avenues by which external bodies may enter the organism. The epithelial cells being the first tissues with which these poisonous bodies come in contact, and having to pass through them before they can enter the systemic circulation, and reach the vascular tissues, they are so deranged as to poison the products organized by them; and these in turn poison other tissues, including the ganglionic and cerebro-spinal systems.

The epithelial cells of the spleen, mesentery, and liver being the most largely engaged in organizing nutrient products, these glands are the most severely taxed, and are the first to suffer extensively from the poisonous palmella, and hence it is, that grave lesions so frequently exist in these organs.

The oblong nucleated cells were invariably absent in the mucous secretions of persons above the ague levels. He found diatoms, dismidea, fungoid spores, and animalcular bodies at nearly all elevations above the ague line, especially in the neighborhood of streams and damp high grounds. In passing to the pools and swampy grounds, where many of his first experiments were made, he had to cross a peat bog: while doing this, he noticed a peculiar dry, feverish sensation was always produced in the throat and fauces, often extending to the pulmonary mucous surfaces, and that his expectoration, after returning, for some time, uniformly contained large quantities of the nucleated oblong cells of the palmellæ, or ague variety. His attention was thus drawn to the partially dessicated surface of the bog, recently broken by the tread of cattle. On this surface, rendered prolific in palmellæ by

being disturbed, he discovered a whitish mould, resembling an incrustation from some salt. Upon suspending the glass plates over this soil, he discovered the oblong palmellæ cells he was in pursuit of. On placing a fragment of this incrustation under the microscope, it was found to be made up of aggregate masses of minute cells, so uniformly met with in the expectoration of those exposed to the cool vapors of malarial levels. These cells were algoid, and emanated from plants of a palmelloid type, but of several species. Amongst the larger ones the mucidinus fungi. These experiments were made near the city of Lancaster, Ohio. South east of the city, along the canal, is a peaty bog of some extent, surrounded by low, humid bottoms. Those living on the edge of the bog are frequently subjects of ague, from May to November, but most prevalent in August and September. To determine at what elevation the bodies found on the under surface of the glass plates could be traced, a funnel, with a weather-cock on the top, to keep the open mouth to the wind, a glass plate in the rear of the small end, covered with a concentrated solution of the chloride of calcium, were arranged, and all so constructed as to turn together, on a pivot, before the wind. By this contrivance, all the bodies floating in the air were found on the smeared surface of the glass screen.

The general summary of this test was as follows: "1st. That the cryptogamic spores and other minute bodies are mainly elevated during the night; that they rise and are suspended in the cold damp exhalations from the soil, after the sun has set; and that they fall again to the earth soon after it rises.

"2d. That in the latitude of Ohio, these bodies seldom rise above from thirty-five to sixty feet above the low levels; that in the northern and central portions of the State, they rise from thirty-five to forty-five feet; and in the southern from forty to sixty feet.

"3d. That at Nashville and Memphis they rise from sixty to one hundred feet and more, above the surface.

"4th. That above the summit plane of the cool night exhalations, these bodies do not rise, and intermittents do not extend.

"5th. That the day air of malarial districts is quite free from these palmelloid spores, and from the causes that produce intermittents."

These experiments are given in the author's own words: they are too important and too interesting to abridge.

With the view of testing more thoroughly and more carefully the local fever produced in the mouth, fauces, throat, and lungs, by inhaling the cells and sporoid bodies emanating from the vegetable organisms, on the freshly exposed, drying ground, he visited, Sept. 2d, 1862, "the bog referred to, for the purpose of collecting samples for further microscopic study. . In a few minutes after my arrival on the bog, I began to feel a dry, feverish, constricted feeling in the mouth, fauces, and throat. The feeling increased till the fauces and throat became very unpleasantly parched and feverish. The opposite walls, in swallowing, adhered together, and the mucous secretions were quite entirely checked. There was a constant desire to swallow, hawk, and spit, without being able to raise much, or to relieve in the least, the dry, feverish, constricted sensation.

"The feeling soon extended to the bronchial and pulmonary surfaces, which became dry, feverish, and constricted, with a heavy congested sensation, and dull pain. These peculiar symptoms lasted about two hours after leaving the bog, before they entirely disappeared. . The malarial matters inhaled, appeared to be poisonous to the surfaces with which they came in contact, and there seemed to be an effort on the part of the exposed mucous surfaces to close up their absorbent secretory organs, until this poisonous matter could be dislodged by the swallowing, and hawking and spitting, which they excited."

Twice afterwards he visited the same locality, and with the same result. The palmelloid cells are the only constant foreign bodies found in the spittle of those immersed in the cool night air of the ague levels. The source of these cells

was found to be the palmelloid plants, growing in such profusion on the drying soils of ague lands during the prevalence of intermittents; and it is hence inferred, that the minute cell emanations from these low vegetable organisms are capable of exciting local fever in the mucous surfaces with which they come in immediate contact; and further, that there is strong presumptive evidence, from the details above given, that, by repeated and continued exposure to them, they may cause general fever, of either an intermittent or remittent type.

But all difficulties on the subject seem to approach a solution, in view of what follows: North of Lancaster, near an old canal mill, where the people are universally subject to chills, in a wide, low, rich prairie, a few rods south of the mill, and west of it, he found the ague palmella growing luxuriantly, covering the soil recently thrown up by moles, and rendered fresh by the tread of cattle. In fact, all over the prairie, where the surface was broken up by any cause, the plants were developing in profusion. On the north edge of Lancaster, and on the west and south sides of Mount Pleasant, is another locality where ague prevails in its worst form, often running into fever of a remittent and continued type. There is a low belt of ground running through this locality, along which are stagnant pools of water. Around these pools, and in the rich, humid, broken soil, he found the ague palmella growing in profusion. On a healthy locality, where the chills had never occurred before, a healthy young man was attacked. He visited him with the attending physician. About fifteen rods south of the house was a new ditch, ten rods long, running through a piece of low, black, humid loam. The freshly thrown out earth and sides of the ditch were covered with ague palmella. Five miles northwest of Lancaster, at a place previously free from ague, he visited a family attacked with a severe form of the tertian type of intermittent fever. The gentleman was attacked on the first, and his wife on the third September. They were relieved by quinine, but relapsed on the 15th. This was arrested after the second paroxysm. Their dwelling stands

on the edge of a low terrace, about thirty feet above the low bottom, which approached within fifteen rods of it, on the south and south-west sides. A small creek empties into the canal, about fifty rods from the house, which made a troublesome bar across the canal: to obviate this, a basin was excavated to receive the drainage of the creek. The soil thrown up was rich peaty loam, with black and blue clay. Before the work was completed, nearly all the hands were taken down with ague. At the time of his visit, about twenty days after the first case occurred, he found the newly excavated soil covered with ague plants. The gentleman and his wife slept in one of the lower rooms on the side of the house next to the excavation, whilst their children, seven in number, slept in the upper story, immediately over them. He and his wife were attacked on the 1st and 3d of September, whilst all his children escaped. The reason given is, that the fog from the newly excavated reservoir extended to the house, and about half way up the wall of the first story, and into his apartment, through the open window, bringing with it the same odour as the soil containing the ague plants, and produced the same febrile symptoms in the throat and fauces. The fog did not rise to the second story window, where the children slept, and disappeared before they were up. He had lived there forty years, and never before had chills in his family. He mentions this case to show that there is a fixed summit plane of invasion, above which the malarious causes do not extend. The best portion of the city of Lancaster stands on a hill, having an area of about one hundred acres: it rises to the height of about sixty feet. The heavy, cold, night vapors, from the bogs adjacent, rise within fifteen feet of its summit. This marks distinctly the ague line: above this line chills do not occur, whilst all below are subject to it. So well marked is the ague line, that persons living in the lower story of a house, below the ague line, are all down at once with chills, whilst the inmates of the upper story, above the line, are exempt. Many localities were visited where intermittent fevers prevailed; and in every instance, without a solitary exception, the ague

plants were found growing in the immediate vicinity of the disease; and in no instance were they found where the disease did not occur. At another locality, in this neighborhood, is a mill-pond: in August and September the water became very low. The ague palmellæ made their appearance on the drying peaty mud in great abundance. From the time these plants appeared till the last of September the wind was in the south. On the north side of the pond there was no one living, and consequently no ague cases. Near the last of the month the wind shifted, and blew briskly from the north and west. About thirty poles from the pond, and thirty feet above it, on a hill side, lived a strong, healthy, laboring family, who had been, up to this time, entirely free from ague.

The wind blew over the pond, directly towards his house. On the fourth day, several members of his family were taken down with chills. The wind again suddenly changed to the south-east, blowing directly towards the toll-gate, forty poles distant, where a family resided, in which were four small children. This family had, up to this time, been exempt from the disease. On the third or fourth day, two of the children were attacked; and, soon after, the father. These are interesting instances of the transmission of malarial influence by the winds.

The Hon. Mr. Burge, one and a half miles from Lancaster, resides on an elevation of one hundred feet above the ague levels, and far removed from them. For sixty-five years his place has been exempt from ague and fever. There were several springs of pure, cold water on the farm: one of which formerly supplied a fish-pond of about ten square rods in size. This pond was drained several years ago, and grew up thickly with grass. About half of it was spaded up in July, and the ague palmella appeared on the first of August. A portion of these were white, and others red, giving the appearance of having been sprinkled over with a thin layer of brick dust. August the 8th, Mr. B. and wife, who slept on the lower floor, began to feel languid with loss of appetite, and pains in the limbs and back. On the 20th,

Mr. B. had a severe chill—the paroxysm lasting about three hours. On the 23d, the farm hand and his wife were attacked. Their houses were respectively ten and fifteen rods from the fish-pond. Mr. B.'s house north, and the tenant's house south of it. Dr. Salisbury examined the patch on the 22d. It was perfectly covered with *ague palmella*. They appeared, as usual, upon the broken thrown up soil. Those on the dry prominences were white, whilst those on the smoother and damper portion were the color of brick dust: the whole surface having the appearance of being sprinkled over with brick dust and lime. No cases occurred among the members of either family sleeping in the upper stories. At his suggestion, the patch was covered with straw to the depth of six inches. On suspending the glass plates over the straw for several nights, he obtained no traces of palmelloid spores or plants. Before this was done, the plates were covered with them nightly. The disease yielded readily, and there was no return of it. This result Dr. S. attributes to the covering of the miasmatic surface with straw.

Where the soil is free from lime, and the water soft, the *ague palmella* is mostly white, or diverging to yellow and green, and intermittents comparatively free from congestive tendencies, the types better marked, the eliminating organs less liable to derangement, and the symptoms more readily yield to proper treatment. In limestone regions, where the water is hard, and the soil is calcarous, during the months of July, August, and September, the malarious portion of the soil becomes covered with pink, brick red, yellow, or greenish *palmellæ*. The brick red and greenish are most abundant. In such localities, intermittents are apt to assume a congestive type. The eliminating surfaces and organs (epidermic and mucus, and portæ and renal glands) become much deranged, and their functions partially suppressed. Oxaluric and often phosphoric states follow; and when this is the case, quinine, iron, and arsenic alone, or all combined, do but little good, and often harm.

The soils around Camp Denizen, wherever exposed by eve



drains, ditches, etc., become, in July, August, September, and October, covered with a green cryptogamic vegetation, which, in places, is of an ink black color. This vegetation is composed mostly of confervoid filaments, which are frequently terminated, when matured, by sporangiæ (?). These sporangiæ are noticed when the vegetation has assumed an ink black color, with a metallic lustre. Mixed with these filaments, are numerous palmelloid plants of two species: the one green, and the other brick red. When mature, these plants, as they become dry, send off multitudes of spores, which are elevated in the night exhalations.

Dr. S. has made extensive examinations, and has never found a case of ague where he did not find the ague plants; and per contra, he never found the ague plants without finding intermittent or remittent fever; or both, in proportion to their extent and profusion. These plants are not confined to the dessicating peaty bogs and humid low grounds, but are common to the drying beds of creeks, pools, ponds, and ditches; and also to calcarous soils, and even sandy planes in humid localities. These plants resemble, to the unaided eye, an incrustation of saline matter: this develops rapidly, as the soils dry; and as rapidly disintegrate and set at liberty their spores, which become elevated and suspended in the cold heavy night exhalations. These spores, as before stated, rise, usually, so that their upper surface in the northern and western States is marked by a plane varying from thirty-five to sixty feet above the ague grounds. The upper surface of these exhalations describes a horizontal plane, stretching away from the place of origin, in the direction traced by the wind. The spores and cells of these palmellæ are found diffused throughout these vapors, but do not extend above them. They occur, however, more abundantly at and near their upper surface than lower down. This will explain the singular fact, often noticed, that at a certain distance from the ague bottom, along the hill side, malarious diseases are frequently worse than on the bottoms themselves. The zone occupied by these exhalations has a temperature and hygrometric condition of its own, differing

materially from the stratum of atmosphere resting immediately upon it, which is much warmer and dryer.

For the purpose of testing more fully, and, if possible, reaching results that would forever settle the causation of intermittent fever, he procured six boxes, and filled them with the malarious soil of a drying prairie bog, which was filled with palmellæ. These he removed five miles, to a locality where intermittent fever had never occurred. They were placed in the window of a room, in the second story of the house, in which two young men slept. On the sixth day, they both felt pains in the back and limbs, with loss of appetite, etc.: on the twelfth day, one was attacked with chill; and on the fourteenth, the other one was taken. Four members of the family were sleeping on the lower floor, none of whom were affected.

The experiment was repeated at another locality of equal healthfulness. Two boys and a man occupied an upper room. The two boys were taken down, one on the tenth, and the other on the thirteenth day. The man escaped. He could not obtain the consent of parties for further experiments. Dr. S. regards the experiments here made as eminently successful, and such must be the decision of all impartial minds. If his discoveries are confirmed by future observers, the result will be a final settlement of the puzzling question of the production of intermittent fever by marsh air. The benefit alike to science and humanity can hardly be estimated. To the science of medicine, especially, is this true; because the charge has often been made, that it was founded upon conjecture, and that its votaries had built few substantial monuments to perpetuate the fame of its discoveries in the field of occult causation. No class of men have labored more earnestly, or developed ideas more abundantly from the dark arcana of nature, than the brotherhood of medicine have done.

Discovery is a work of time. The field embraces all the elements of disease, distinct and general. The human system is a labyrinth not to be learned in a life-time, but requiring many generations to unfold its secrets, and, one by

one, to trace out its organs and functions, and the physical signs indicated in the opposite states of health and disease. Countless obstacles have been thrown in the road: numerous laws have been passed to protect graveyards, and to punish depredations upon them; and, at the same time, there are laws to punish physicians for mal-practice in medicine and surgery. The charge of ignorance and incompetency is frequently made, and results are pointed to in evidence of it: and all this in the face of existing laws that prevent and override inquiry. The physician is expected to understand the pathological conditions of the human system, and unravel the mysteries of causation by feeling of the pulse and looking at the tongue. If a post mortem is requested, it is almost invariably denied; and opportunities only occur, when the poor, friendless wanderer falls dead in the street, or in some public charity, to prosecute the study of the pathology and treatment of diseases. We give our dead friends to the mould and the worm to revel in and destroy specimens of morbid anatomy, that might open a new and glorious page in the history of medicine, if opportunities for investigation were allowed.

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## ARTICLE II.

*Lines on Indiginous Medicinal Plants.* By D. L. PHARES, A. M., M. D., of Newtonia, Miss.

*Viburnum Prunifolium.*—This small tree grows in rich, dry woodlands from Florida to the Mississippi river, and northward. For description, see Chapman's "Flora of the Southern United States," and other works. The part used is the bark, 3ss to 3i, in powder; infusion f 3ss; or saturated tincture f 3i.

It is nervine, antispasmodic, tonic, astringent, diuretic, and may be used to very good purpose in urinary affections, ophthalmia, aphthous sore mouth, chronic diarrhœa, dysentery, indolent ulcers, etc. It is an excellent remedy in colic, cramp, spasms, palpitation, and other affections incident to pregnancy, or arising from uterine disorder, and for after-pains. But it is *Particularly valuable in preventing abortion and miscarriage, whether habitual or otherwise ; whether threatened from accidental cause or criminal drugging.*

It tones up the system, preventing or removing those harassing nervous symptoms that so often torment, wear down, and disqualify the pregnant woman for the parturient effort. It enables the system to resist the deleterious influences of drugs, so often used for the purpose of procuring abortion. It is well known, that the inner bark of the cotton root is used by many to induce miscarriage—one pint of the strong decoction being sufficient for this purpose. The regular exhibition of the viburnum completely neutralizes the effect of the gossypium, compelling the delinquent mother, however unwilling, to carry the foetus to full term. Some farmers, on whose plantation I have used this medicine, and who have seen much of its effects on negro women who always managed to miscarry, declare their belief, that no woman can possibly abort, if compelled to use the viburnum. This may be claiming too much for it. But it has certainly prevented abortion in every case in which I have ordered it for the purpose. Negatively :—miscarriage has never taken place, so far as I am informed, in any case in which this medicine was used as a preventive.

Brief notes of a few cases will give a better idea of my mode of employing this medicine.

Case I.—Mrs. —, widely known as authoress, of very pale, delicate appearance, aged about 27, when some three months married, aborted, from injury received in leaping from the floor into bed. Once or twice subsequently, she aborted at the same stage of pregnancy; once, I learned, twins. In August, she came under my care for severe intermittent fever; and, on 16th September, 1864, being again

pregnant, she consulted me with a view to prevent abortion. I ordered tincture viburni, f 3 i bis, *vel ter in die*; oftener, when threatened, till the danger is passed. She continued going on well for more than three months after the usual time for her misfortunes, when, removing beyond my reach, I lost sight of her. Several times she had to use the medicine very freely. I think it was on the 6th of October, an artillery and cavalry fight took place near the house where she was boarding: her husband, wounded some time before this, was compelled to fly for safety; charges were made through the yard; a number of soldiers were killed about the place; the house was ransacked; and an old gentleman living with the family murdered: yet, she passed safely through this time of excitement and trial.

Case II.—In March, 1865, Mr. W. consulted me in regard to his wife. He said she had never gone to full term, but had had several children at the 8th month, all of them dying one month after birth. Frequent pregnancies and hemorrhages had seriously impaired her health, for improving which I ordered suitable remedies. To prevent premature parturition, she being again pregnant, I directed tincture viburnum. At the 8th month, as usual, labor commenced vigorously, with copious sanguineous discharge. Both were soon arrested by a free exhibition of the viburnum. She went on to full term, and gave birth to a healthy boy, who still survives at a year old.

Case III.—Mrs. M——, mother of several children, has, for several years, suffered much from dysmenorrhœa, leucorrhœa, hemorrhages, and abortions, and is pale, feeble, and despondent. I ordered iron by hydrogen, to improve the blood and nervous system, Fowler's arsenical solution, to check leucorrhœa and prevent hemorrhage, and tincture viburnum to allay uterine congestion, pain, irritation, and to tone up the reproductive organs. Some months afterwards, March 2d, 1865, I was summoned, in haste, to see her. She was much improved every way, and supposed two or three months pregnant. Two bodies of troops had been ordered to form a junction and prepare for battle, instantly,

at a point a mile distant, but visible from the upper story of the dwelling. Running hastily up stairs to see the array, she was hurt: pains commenced, and, almost immediately, pretty free hemorrhage, which alarmed her excessively. A viburnum tree growing in a few paces of the house, I ordered infusion of the bark, which soon put a stop to both hemorrhage and contractions. On the 16th August following, before day, she was alarmed by the escape of liquor amnii, and I saw her early in the morning. As there was no pain, contractions, or other indications of labor, I left her. This was a small leak, and she informed me that labor had been brought on in a previous pregnancy by a similar leak. About dark of the next day, forty hours after the flow commenced, I again saw her, and at 11 P. M. delivered her of a healthy eight months child, which still survives.

Case IV.—January 22d, 1866, Mrs. L——, eighteen months married, had miscarried last year, in consequence of which she had suffered long and much, now pregnant and threatened with abortion. I ordered tincture viburnum f 3 i thrice a day; oftener if necessary. She went on well till the 10th of April, when she was severely injured by a fall from her carriage. Strong uterine contractions ensued, but were arrested by the medicine, which had to be used freely for several days, gradually diminishing the quantity per diem. For nearly a week abortion was threatened whenever the use of the viburnum was too long omitted. From this time she went on to full term without further accident, and was delivered of a large boy.

Case V.—January 25, 1866, Mrs. H——, married in 1862, has had no children, but an abortion or two, now pregnant, and threatened with abortion at the usual stage with her. I gave her tincture viburnum, with directions to use *pro re nata*. March 4th, summoned again to see her. I find she has had considerable pains, contractions, and discharges for two days. She had taken the medicine as ordered, and was now up, easy, and the discharge a slight oozing merely. Ordered the medicine discontinued for the present. She

had to use it again a month later, and from that time continued well, and at full term, gave birth to a healthy child.

Case VI.—July 11th, 1866, Mrs. J——, six or seven months pregnant, has had labor pains increasing in frequency and force for over thirty hours. I ordered tincture viburnum every hour, or as often as needed, till pains cease. Labor was soon arrested; and no further trouble has occurred.

Case VII.—Mrs. P——, April 16, 1866, has had severe colic, after noon, several days. Tincture viburnum f 3 ias was ordered, and the single dose was all required.

Many cases might be cited, but the above handfull will suffice as well as a thousand. There will be cases and conditions, of course, in which no intelligent practitioner would attempt to prevent abortion by the use of viburnum, or any other means; as where the placenta is extensively detached, the membranes ruptured, the foetus partly expelled from the uterine cavity, etc.

I have heretofore, for some years past, made known the use of this valuable agent, in conversations with members of the profession, as well as by letter. Its value as a medicine is so well ascertained as to justify a lengthy article in print, and its general use by the medical profession. The bark may be gathered at any time, but is best, perhaps, gathered in October and November. When practicable, I have preferred obtaining it from trees in open, exposed situations. Situation materially affects the qualities of plants. A plant, for instance, which, gathered on the level of New Orleans is inert, gathered here, is probably the best remedy in the world for tetanus: of which, more another time.

## SELECTIONS.

[CONCLUDED FROM PAGE 372.]

*Amblyopia, Amaurosis, and the Extraction of Cataract.* By  
LAURENCE TURNBULL, M. D., Philadelphia.

The "Clinical Remarks on a Case of Extraction of Cataract" occupy twenty-four pages. A few practical points we here marked, and first, as to simple cataract, if there is such a thing, "are those cases where we are unable to discover any affection of the deeper structures of the eye, and no break exists in the nervous apparatus. Only one eye should be operated upon at a time." The translator corroborates this from Wecker, who states that the elementary principles of prudence indicate sufficiently the impropriety of performing the operation of cataract on more than one eye at a time.

The opinion of some of Von Graefe's colleagues, that extreme age does not exert a particularly unfavorable influence on extraction, is most emphatically contradicted by his tables, which show, after the 65th, and particularly after the 70th year, a considerable falling off in the percentage of recoveries. A sunken position of the balls has been particularly dwelt upon as an unfavorable circumstance, in so far as it interferes with the mechanical execution of the operation. This is only so when it depends on general marasmus, and coupled with senile diminution in the diameter of the cornea. The tendency of iritis is decidedly greater in marasmic eyes, (increasing, as it does, in proportion to the age).

Taking all the circumstances into account, the general prognosis of flap extraction must be here essentially modified. According to his reckoning of 100 cases of flap extraction, 65 result favorably, by which he means the gaining an acuteness of vision of at least  $\frac{1}{4}$ ; if more than 75 years of age, of at least 1-6. In 15 of the remaining 35, a favorable result is attained by a subsequent operation, consisting either in an operation for secondary cataract, or in an iridectomy with an operation for secondary cataract; of the 20 that now remain, about a third get at least vision enough to go about alone, (acuteness of vision 1-50 to 1-30,) a second third gain still less, and from 6 to 8 per cent of all eyes operated on remain or become entirely blind.



What advantage is to be gained by combining an iridectomy with flap-extraction? Does it ward off the danger of diffuse suppuration of the cornea? Not in the least. While it appears that iridectomy offers no protection against the occurrence of diffuse and partial suppuration, on the other hand, it does insure a more favorable course of things, and, to a certain extent, prevents the occurrence of iritis and prolapse of the iris. All so-called preparatory treatment is not only superfluous, but mischievous, unless indeed, there are special circumstances in the individual case requiring attention. It is sufficient to induce a gentle evacuation, by the use of castor oil or some other mild laxative, the day before the operation.

If we have a chance of previously watching the patient, it would be well to test the effect of a dose of morphine at least two days before the operation, in order to ascertain how the individual is affected by a drug we are so likely to subsequently employ, and which acts so differently in different cases. Use the upper section if we adopt the compressive bandage. In accordance with our usual practice, operate on the patient in bed. Special stress is laid on the proper management of the bandage after the operation. "The orbital hollow is first evenly packed with charpie, which has been picked over and put together in the form of small tufts, the whole being secured by a single turn of a snug-fitting flannel bandage passing over one eye. This is held in place by another single turn around the forehead, the first half of which comes before, the other half after the turn, passing over the eye. The middle portion of the bandage passing over the eye is knit of cotton, and not of flannel. Tolerably firm pressure must be made during the first few hours, and then gradually relaxed, in order not to hinder the escape of liquid secretions."

The author gives the details of a case of a female, aged 64, which we cannot follow, but sufficient for us to give the result after the operation. The entire corneal wound becomes infiltrated with opaque yellow matter, to the extent of nearly 1", and evidently throughout its entire thickness. The whole corneal flap has a yellowish, sodden appearance. Through its upper third alone is the iris visible, and the re-establishment of the anterior chamber evident. The cut edges are not in contact. The suppuration is not from the iris, but from the cornea. What can we do that will tend to limit the suppuration? Shall ice-cold applications be made? No. Application of leeches? No. Shall venesection

tion be performed? No. What remains to be done? The bandage changed every three hours, subsequently at longer intervals, in case the suppuration shows the desired diminution. Between the applications of the bandage, camomile fomentations at a temperature of 95 degrees, are to be used on the lids. The diet to be bouillon, and to drink milk. The operation was performed, we should judge, on the 4th of January. On the 9th, the warm fomentations were omitted, and atropine to be instilled.

January 20. The progress of the case has been as favorable as could possibly have been anticipated. The purulent infiltration in the vicinity of the wound has become more consolidated, and will leave a cicatrix about  $\frac{1}{4}$ " in breadth. A tissue in process of organization may be seen to extend from the wound to the pupil, indicating the course of the previous suppuration. The effect of the atropine may be seen in an enlargement of the pupil upward—artificial pupil entirely filled and contracted for a subsequent iridectomy; and this he considers due to the constrictive bandage kept up for five days after the date of the last record. The results would have been more favorable if the bandage had been used earlier.

In concluding our notice of Dr. Derby's translation, we most heartily thank him for his labor of love for our benefit, for it is a most valuable addition to our knowledge of the subjects treated of, more especially that part of it on the difficulties and dangers of all the forms of extraction of cataract. The customary mode is to report only successful cases, and so to give the impression that in the great majority of instances it is a successful operation. But our experience of the last twenty years has demonstrated the falsity of many of the reports in regard to this operation, and indeed of all operations for the removal of cataract. We find that, since 1863, Graefe has modified his operation, and his new method of extraction he calls "the modified linear extraction." According to Dr. A. D. Williams, "since June, 1865, he has practised this new operation exclusively in all cases of adults where the cataract is hard." A full translation of this method, by Dr. Samelson, will be found in course of publication, with illustrations, in the *London Ophthalmic Review*, which we before referred to; but we, in our short notice, prefer the letter of an American physician, who gives a more concise description of the *modus operandi* and results. The patient lies on a sofa or couch, as usual.

Chloroform may be administered or not, as may be thought best by the operator, or desired by the patient.

"A strong wire speculum is introduced, which holds the lids wide apart. The eye is fixed with a forceps by fastening the conjunctiva near the lower margin of the cornea, and can be turned downward or in any desired direction. When thus depressed and held by the forceps, the eye is ready for the incision. The knife used is very small, varying from one to one and a quarter inches in length, and from one and a half to two lines in width in its widest part.

The point is very fine and sharp, and passes almost without resistance through the cornea. The incision is made directly upward, the eye, of course being held in proper position. The sclerotica is punctured as far back as possible, so as still to enter the anterior chamber directly in front of the outer margin of the iris. The knife is now carried forward in the direction of the centre of the dilated pupil, until it passes beyond that centre, when it is turned upward close in front of the iris, on the opposite side, where the *counter-puncture* is effected through the sclerotica. It is now held close to the anterior surface of the iris, and by a gentle, sawing motion the flap is completed. When the section of the sclerotica is accomplished, the edge of the knife is turned directly forward, so as not to make too large a conjunctival flap. The length of the wound should embrace about one-third of the circumference of the eye, parallel with, but behind the margin of the cornea. The conjunctival flap is now moved out of the way by gently laying it back with a pair of forceps toward the cornea. The iris generally prolapses, and now lies perfectly naked in the wound. Simple iridectomy, in the usual, well known way, is next made, and must be large, extending from one end of the incision to the other. The large iridectomy facilitates very much the exit of the cataract, by making the opening through which it has to pass out freer. Now comes the incision of the anterior capsule, which is done in a peculiar way. For this purpose, a common hook, slightly bent so as to facilitate its introduction into the anterior chamber, is used. It is passed in front of the lens, till it comes nearly opposite the lower margin of the expanded pupil, when by rotation, the point is brought in contact with the capsule. Then by gently drawing it upward and inward, the capsule is divided entirely to the upper and inward margin of the lens, terminating at the edge of the artificial pupil. A second slit is now made, starting from the original point, and

terminating at the upper and outer margin of the cataract and the corresponding edge of the new pupil. In this way the capsule is opened in the form of a V, with the base upward, so that every possible obstacle to the escape of the cataractous lens is removed. Now, how is the lens to be extracted? He makes use of a pretty large scoop, and bent at a more accurate angle than that of Daviel, for convenience of manipulation. The posteral lip of the scleral wound is now pressed gently downward and inward, so as to bring it rather beneath the upper edge of the lens, and thus allow the cataract to slip out. Should this not succeed, he makes a 'sliding manœuvre' from right to left, or *vice versa*, along the posterior lip from one end to the other, passing it inward at the same time, as much as is advisable. This simple movement frequently resulted in loosening the cataract, and causing it to escape. If this, in turn, does not succeed, he lays down the scoop, and takes up a small hook, made expressly for the purpose, and introduces it through the capsular opening at the upper margin, passes it carefully behind the lens but within the capsule, till its point reaches near the lower edge of the same. The hook, of course, introduced with the plane of the point parallel to the capsule, is now turned with the point forward, and pressed into the hard substance of the lens. By very *slight* traction the cataract is drawn out. It is to be supposed that one or the other of these three manœuvres will be successful. Up to the present time I have not witnessed a single operation when they all failed. From my observations the hook will have to be used in about half the cases. As in all other operations for extraction, these manipulations must be made with gentleness and caution, and never in a hurry, or with force. These delicate precautions are necessary to avoid the rupture of the hyaloid membrane and escape of vitreous humor. After the hard nucleus is removed, the remaining soft cortical substance is induced to escape by gently rubbing the lower lid over the cornea a few times, from below upward, as in ordinary flap extractions. The wound in the sclerotica is now cleared carefully of all particles of lens, or coagula of blood, so that the coaptation may be perfect. The flap of conjunctiva is now turned back into its natural position, and nicely adapted with the forceps, so as to cover the wound in the sclerotica. The eye is at last closed, the orbital cavity filled up with charpie, and over this the usual bandage, moderately tight, is applied. I should have mentioned before, that the speculum and fixation forceps are

removed immediately after the exit of the nucleus, or bulb of the cataract. The patient is kept quietly in bed, and free from all excitement, and not allowed to talk or chew anything hard. The diet is restricted to rather a minimum quantity of fluid articles, and the patient is not allowed to rise up, unless it is absolutely necessary to answer the calls nature. Some six or seven hours after the operation the eye is opened, the charpie replaced by fresh, and the bandage is taken off twice, and atropia instilled into the eye, and this is repeated each day. By keeping the eye bound up several days, the possible springing of the wound is avoided, an accident by no means uncommon after flap extractions. Only one instance of this kind is reported, after the operation by Graefe's method. The operations are all made down stairs, so that the patient must be led up two or three flight of stairs to their rooms. On an average, patients are discharged, after the operation, in from ten to twelve days, and some even inside of a week. On the second day they are allowed to sit up if they wish. I see persons here who are operated on Friday, and on Monday are taken down to the lecture-room to be presented to the class, and again walk up the stairs to their rooms. Such a thing would hardly be allowed within ten days after an ordinary extraction. The wound in a sclerotica heals first by intention, and in a remarkably short time. The conjunctival flap unites very soon, by means of its sub-conjunctival tissue to the episclera, and thus completely closes the wound in the sclerotica. A *cystoid cycatrix*, which occurs so often after iridectomy in glaucomatous eyes, has not yet been observed after this modified form of linear extraction. By cystoid cycatrix is meant those instances where the cut in the sclerotica does not heal, but allows the aqueous humor to escape through it under the conjunctiva that has united over it—thus forming a bladder or little cyst—hence the name. This form of cicatrization after iridectomy for glaucoma, is not owing to the fact the *incision is made in the sclerotica*. The cause is to be sought in the nature of the disease, especially the unnatural tension of glaucomatous eyes, which predisposes to healing by such a process.

"The reaction after Graefe's new method, is very inconsiderable indeed. The conjunctiva, it is true, reddens smartly from the incision and from the irritation produced by the fixation forceps, but the cornea and sclerotica only exceptionally, take on even a slight degree of inflammation. As a rule, little or no pain follows the operation, and no

constitutional disturbance. Some stress has been laid on the question as to who shall hold the forceps during the different stages of the operation. This, I think, may be left to option and convenience of the operator. He may fix the eye himself, or entrust it to a safe and reliable assistant.

"In the brief account which I have given of the 'modified linear extraction'—a method that promises, sooner or later, to come into general use—I have confined myself to a statement of the different steps in the *normal* operation, and have avoided purely theoretical questions, Graefe, in the article above excited, gives the results of sixty-nine cases operated by his method. Of these, none were completely lost. There were sixty-two perfect, and seven imperfect results. Among the latter were six who could see comparatively well, and two, at the time of his writing, (Aug. 1865,) stood a fair chance to get better vision without a second operation. Four will have to be operated on for secondary cataracts, an occurrence not at all uncommon after all cataract operations. In the seventh case the sight was very imperfect, but there was a tolerable prospect of improvement by subsequent removal of the opaque capsule."

In regard to this modification of Von Graefe's, it must be tested by numerous operators before a true verdict can be given. Dr. Wecker speaks in his recent work in the most favorable manner of *his method*, which is the extraction of cataract, together with its capsule, without laceration, under the influence of ether, which anæsthetic he prefers to chloroform.—*Med. and Surg. Reporter*.

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*Alcohol as a Dressing for Wounds, with Special Reference to its Employment by M. Nélaton, at the Clinical Hospital, Paris, France.* By W. LOCKWOOD BRADLEY, M. D., New Haven.

[Read before the New Haven County Meeting, April, 1898.]

While State legislatures have been endeavoring by laws of prohibition and license to restrict the use of alcohol as a beverage, its employment as a medicinal agent has steadily

increased. As it has been well expressed by Dr. Wilks, editor of the London *Lancet*, "there are few things more remarkable in the recent history of medicine than the extent to which alcohol has been introduced, and the importance which has been attached to it in the treatment of disease."

In the present paper, it is proposed to offer some remarks upon the treatment of wounds, surgical and traumatic, with alcohol. The idea thus enunciated is by no means original; on the contrary, it was known to Hippocrates, Galen, and Ambrose Paré. An analysis of preparations, employed by them in the treatment of wounds, need not be very searching to prove that alcohol was often the basis of their interminable and now superannuated formulas. Two illustrations will be sufficient. The "balsam of Fioraventi" was composed of turpentine, myrrh, aloes, ginger, canella, with other substances, and more than three thousand parts of alcohol. Again: the barbarous practice of scalding gunshot wounds with boiling oil was changed by Ambrose Paré for the employment, with other applications, of the alcoholic solution or tincture of myrrh.

Coming down to more modern times, alcohol was used by Baron Larrey during the campaigns of the first Napoleon. Since then it has been employed as a popular remedy both in France and America. In the year 1859, M. Bataillé, of Paris, published ("De l'alcool et des composés alcooliques en chirurgie") the result of some experiments performed upon the lower animals. Among other points, it was proven that alcohol favors the immediate union of wounds in three ways: first, by arresting hemorrhage from the smaller vessels (blood being a great obstacle to perfect coaptation); second, by producing immediate coagulation of albumen; lastly, by promoting the plastic secretion.

At a somewhat later period, alcohol was introduced as a surgical dressing in two of the principal hospitals of Paris, by M. Dolbeau, at the St. Louis Hospital, and M. Nélaton, at the Clinical Hospital. Of forty-eight cases treated at the latter hospital during the first eight months of 1864, forty-two healed rapidly, and three after an attack of erysipelas. Three terminated fatally: one from cancer, one from phthisis, and one from purulent absorption. Thirty-nine were the result of important operations, such as amputation of the leg and the removal of an enormous tumor. In one case the denuded surface measured six inches in the transverse diameter. The record for 1863 shows an equal degree of freedom from pyæmia, erysipelas, and like accidents. M. Néla-

ton and others believe that these results are dependent, in a great measure, upon the therapeutical effects of alcohol.

I propose to consider these effects with special reference to changes which may take place in wounds healing by the second intention. For an accurate and scientific description of these changes, I am indebted to Mr. Paget. ("Lectures on Surgical Pathology," Philadelphia, 1860.) He informs us that after the infliction of an open incised wound, the blood gradually ceases to flow, and is followed by a blood-tinged or serous-looking fluid; this gradually becomes paler, and collects like a whitish film or glazing upon the surface of the wound. Moisture, whether in the form of water, dilute alcohol, or glycerine, will produce this result.

According to the same authority, this condition, called by him the state of calm or inactivity, is ended in from two to eleven days by the return of blood to the part. In what way the ordinary water dressing can favor this return it is difficult to understand. On the contrary, alcohol assists reaction, not only by its known power as a local excitant, but also by being absorbed, and thus stimulating the general circulation.

M. Chédervergne, of Paris, has published ("Du traitement des plaies chirurgicales et traumatiques par les pansements à l'alcool, p. 15, 1864,) three cases going to prove and illustrate the truth of this statement. He states that in December, 1863, a patient entered the Clinical Hospital, carrying an enormous tumor, situated upon the posterior part of the left leg; this was removed, leaving a large denuded surface, extending from the propliteal space to the heel. An alcoholic dressing was applied, and five days after the patient showed symptoms of intoxication, which it was impossible to attribute to any other cause than the treatment employed. He also mentions (*ibid* p. 21,) two other cases in which a feeling of exhilaration was excited.

Looking at the subject merely from a theoretical point of view, we should fear that alcohol, by its local and constitutional effect, would excite excessive reaction. Such, however, is not the result of actual experiment at the Clinical Hospital; and M. LeCourt, professor at the Medical School of Caen, states ("Une lettre avec des observations cliniques sur l'emploi des alcooliques en chirurgie," Paris, 1859) that he has employed alcohol as an application to wounds in at least fifty cases, and that in only a small proportion of the entire number was he compelled to suspend the use of the dressing on account of too great inflammatory action. Some



degree of inflammation seems necessary, since, in the opinion of Mr. Paget, (p. 140,) the ordinary process of granulations in its commencement, morbid, and resembles inflammation in at least two points, namely: 1st, that the increased quantity of blood in the part producing granulations moves more slowly than in health; and 2dly, that the increased supply of blood precedes the increased production of material. This material is similar, in every visible respect, to coagulable lymph. If undisturbed, it will soon present minute points of vascularity; these gradually increase in extent, and in two or three days give place to granulations.

It is at this stage of the healing process we so often observe the inefficiency of water or cerate. The circulation in the part is so languid, that the granulations frequently become large, flabby, and livid. On the contrary, when alcohol is employed, the granulations are uniformly florid, granular, and scarcely raised above the surrounding tissues. Suppuration or degeneration of the plastic lymph is hardly perceptible.

M. Nélaton and others do not claim for alcohol an infallibility which does not belong to quinine or any other so-called specific; on the other hand, they *do* believe in its prophylactic power against pyæmia and erysipelas, and in confirmation of their belief, bring forward facts relating to the non-occurrence or diminished frequency of these affections. To appreciate the full meaning of these observations, we must remember that they were not collated from private practice, but in one of the largest hospitals of Paris—a hospital situated in one of the most unhealthy districts of the Latin Quarter, and presenting an unusual array of circumstances predisposing to surgical complications. Among such we may enumerate, crowding, poor ventilation, insufficient or inappropriate food, absence of the consolations and encouragements of friends, and generally constitutions naturally weak or debilitated by disease.

All of these influences were present in the surgical wards of the Clinical Hospital, and yet, under the employment of alcohol, only one case of pyæmia occurred during the first eight months of 1864. In like manner, during the first five months of the same year, there was not a single case of traumatic erysipelas, although numerous cases of an epidemic nature happened in other Parisian hospitals. About the first of June, however, the Interne of M. Nélaton reported three cases, of which the following is an abbreviated translation:

Observation 1st. The first case was that of a young man, aged sixteen years. He submitted to an operation for the removal of a large ganglion, situated in the region occupied by the parotid gland. General symptoms of erysipelas set in, with chill, fever, and derangement of the stomach. The wound looked well; but on the third day of the fever, an erysipelatous inflammation was discovered, occupying the shoulders, the scalp, and the eyebrows; in other words, surrounding the parotidean region, but always respecting the borders of the wound and the parts bathed with alcohol.

Observation 2d. The second case was that of a woman, aged sixty-two. On the 23d day of May, 1864, she underwent an operation for the removal of a cancerous tumor of the breast. The same general phenomena, as in the first case, showed themselves; in two days erysipelas appeared, with its customary character, upon the trunk, then upon the arm, near to the breast which had been removed, but did not invade the part which had been dressed with alcohol.

Observation 3d. The third case was that of a woman forty-nine years old. On the 24th day of May, she sustained an operation for the removal of a tumor on the thigh. The wound was dressed with alcohol, and for a time all went well; suddenly the appetite diminished, and a febrile reaction supervened, followed by a red oedematous inflammation upon the back. In three days this disappeared; but after seven days there was erysipelas of the face.

The three observations thus presented possess an interest even greater than those relating to the non-occurrence of erysipelas; they show the enemy no longer kept in the background, but actually making the attack and suffering defeat. In other words, they picture an erysipelatous inflammation spreading to the very precincts of the wound, and there being arrested.

In addition to what has already been said, it may be remarked, that alcohol, in common with water, surpasses all other applications in point of cleanliness. When first applied to a denuded surface, it causes a sensation of heat, but in a few minutes this disappears, and after two or three applications, on successive days, does not return. Patients, questioned upon this point, do not complain so much of the hot as of the cold sensation occasionally experienced.

A stranger, entering for the first time the surgical wards of the Clinical Hospital, will notice that the atmosphere is unvitiated by any foul odor, and unchilled by evaporating water.

And now a few words upon the best method of applying alcoholic dressings. The alcohol employed at the Clinical Hospital is about equal in strength to the dilute alcohol of the U. S. Dispensatory. Generally it contains a proportion of camphor; but this is not considered essential. Occasionally circumstances may require that the alcohol should be further diluted. We may raise the temperature of the mixture, and so avoid the disagreeable sensation of coldness by taking the strong officinal alcohol, and just before applying it, adding an equal volume of water. The preparation may be brought in contact with the wound by lint or oakum, and the evaporation be prevented, in a great measure, by thick cloth or oiled silk. Unusually it is sufficient to renew the dressing once or twice in the twenty-four hours.

In conclusion, I would say, that I have purposely avoided the discussion of theoretical points. Nor have I noticed an opinion which I once heard expressed by M. Maissonneuve, in effect, that alcohol causes paralysis of the blood vessels, and so predisposes to secondary hemorrhage. This theory was first proposed by Claude Bernard, to account for the non-absorption of a certain poison; and, so far as I am aware, its truth has never been demonstrated. It has rather been my object to present facts which have been clinically observed by the Surgeons and Internes of the Hôpital des Cliniques. It now remains with clinical students of this State and America to substantiate or subvert the foregoing conclusions; to determine how far the beneficial action of alcohol, as a surgical dressing, will warrant its substitution for less expensive and time-honored applications.—*From Proceedings of Connecticut Medical Society, 1866.*

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### *The Sphygmograph.*

The Sphygmograph, which is exciting some attention just now, is one of those ingenious instruments which have been devised of late years, promising really to assist medical men in reducing their art to something like a science. Its great merit is this: that it gives a permanent and minutely accurate record of a phenomenon which before was known only

by the very unsatisfactory discrimination of the sense of touch.

The sphygmograph is an instrument for producing a self-written record of the swellings and contractions of the arteries known as the pulse.

Its inventor, Dr. J. E. Marey, is a Paris physician, who is well known for many physiological essays. The main features presented by the instrument are the following:

A principal beam of light construction is fastened on the arm by padded straps; to this is attached a lever of nearly the length of the forearm; the shorter arm of this lever rests gently, but firmly, on the pulse; at each rise of the artery, and subsequent fall, the motion is exactly imparted to the lever, and the end of the longer arm performs the same movements as does the shorter, but on a much larger scale. To the end of the longer arm is attached a fine pointed pencil, in contact with which a smooth strip of paper is made to move by clockwork in a horizontal direction. The effect of this arrangement is, that a straight line would be drawn on the piece of paper were it not for the rhythmic perpendicular movement caused by the pulse, which results in the production of an undulated line, the waves in which represent the separate expansions of the artery; of course, it is evident that since the movement of the paper is invariably uniform, the variations in the pulse will be distinctly indicated by the height, length, and form of the waves; and accordingly we have a most accurate and valuable means of comparing the pulse in various individuals and under various circumstances. Some interesting results have been obtained by studying the pulses of diseased persons, and the instrument has been found to exhibit phenomena in the pulse which it was quite impossible to detect by the rough-and-ready means of the fingers. The "sphygmogram" of a person afflicted with a certain disease of the heart, for example, is found to exhibit a series of undulations, the ascending line of which is very long and tremulous, and but slightly oblique, while the descending is abrupt and nearly perpendicular. The application and value of the instrument will be apparent from these remarks.—*Quarterly Journal of Science, London, July, 1866.*

*Relief for Spasmodic Asthma.*

Dr. J. S. Monell, in a communication to the *Medical Record* on this subject, writes as follows:

"Having been a sufferer from frequent, severe, and protracted attacks of spasmodic asthma, for a period of fifteen years, and having, by accident, hit upon a means for speedy relief, I am induced to present the same to the profession, in the hope that by its adoption it may prove as beneficial to such as are subject to attacks of this distressing affection as it has been to myself and to some of my patients.

"In December, 1865, I was having a severe attack of asthma one evening about nine o'clock. I placed myself standing at the foot of my bed, with my arms folded on the foot-board for a pillow, the forehead resting on the folded arms, and the feet placed at a sufficient distance to make a partial semi-circle of the body. While laboring severely for air, the thought occurred to me to cease breathing for a few seconds. I did so, and after several trials I felt some relief. I then expired all the air that it was possible to, after which I determined not to inspire again until I found it absolutely necessary. I succeeded in waiting several seconds; then inspiration was carried to its fullest capacity, and retained with great effort for many seconds. This act of forced expiration, waiting, thorough inspiration, and again waiting, was continued for some fifteen minutes, and, to my delight, the spasm was perfectly relieved. I have since relieved several similar attacks, by the same method, in less than two minutes.

"I have advised this course for many others, and their testimony has been uniformly satisfactory, except in one instance, that of an aged lady with heart disease. It requires a great effort on the part of the patient to perform the act. It is well for the medical adviser to perform it personally in presence of the patient, and then desire him to perform it once or twice under his supervision. The first attempt of retaining the inspired air during the asthmatic attack will cause the patient to think he cannot continue it, but perseverance will soon delight him with relief from the spasm."

## EDITORIAL AND MISCELLANEOUS.

### ATLANTA MEDICAL COLLEGE.

We have frequently taken occasion to allude to the facilities in this Institution for teaching medicine. Since the war, the building has been thoroughly repaired, and the grounds snugly fenced. In addition to this, and the replacing of destroyed apparatus, a hospital has been built in connection with the College, in which sixty to eighty beds are now constantly filled with the poor, black and white, of the city. By this means, the indigent sick of the city are cared for without expense to the city government, and a fine opportunity afforded students, during the course of lectures, to witness the treatment and progress of cases, to which they are allowed constant access. In addition to this, a Dispensary in the College has been established by the Faculty, in which fifteen to twenty indigent sick of the city, who are able to go or be carried to the College, are prescribed for daily by members of the Faculty, and medicines furnished gratuitously. These cases are examined and prescribed for, during the session, in presence of the class, and afford also an opportunity to students desiring it, for writing out and filling prescriptions.

The city authorities have thus, by a timely donation, enabled the College to move forward unembarrassed in the full exercise of all her departments. For this the Trustees and Faculty will ever feel grateful, and in return will endeavor to relieve the city, to the full extent in their power, from the burden of caring for the wretched poor on her hands.

The Dispensary, discontinued for a while after the close of the present year's course of lectures, is now resumed, and will be continued through the next Annual Course of Lectures, commencing the first of May next. The following statistical record shows the character of diseases, and the number of cases of each, treated in the Dispensary, from the first of May to the last of August. It will be seen that about *four hundred and thirty cases* were presented, besides received into the hospital on the College grounds during the same period:

Abscess,.....	2	Ascites,.....	3
Anasarca,.....	7	Bronchitis,.....	10
Amenorrhæa,.....	4	Conjunctivitis,.....	7
Asthma,.....	2	Croup,.....	1

Constipation,.....	3	Inguinal Hernia,.....	1
Cancer,.....	1	Irritable Uterus,.....	6
Continued Fever,.....	2	Imaginary Disease,.....	2
Caries of tibia,.....	1	Indigestion,.....	11
Cachexia,.....	1	Irritable Stomach,.....	2
Cataract,.....	1	Inflam't'n Sub. Max. Gland, 1	
Critical Period,.....	1	Jaundice, .....	2
Cancrum Oris,.....	1	Lencorrhœa,.....	4
Contusion,.....	1	Lumbago,.....	7
Cholera Infantum,.....	3	Laryngitis,.....	1
Catarrh,.....	4	Menengitis,.....	1
Diarrhœa, Chronic,.....	3	Membrana Tympani dis'ced, 2	
Diarrhœa, Acute,.....	40	Muscular contrac. of Thigh, 1	
Duc Steno Occluded,.....	1	Menorrhagia, .....	3
Diphtheria,.....	2	Mammary abscess,.....	1
Deafness,.....	1	Marasmus, .....	1
Dysmenorrhœa, .....	3	Neuralgia,.....	11
Debility, .....	5	Nervous Depression,.....	2
Debility from Variola,.....	7	Nephritis, .....	1
Debility from Rubeola,.....	1	Ovaritis, .....	1
Debility, Senile,.....	1	Otitis,.....	1
Dysentery,.....	5	Pleurodinia, .....	1
Eczema,.....	1	Pertussis,.....	8
Enteritis,.....	8	Pneumonia, .....	9
Epilepsy,.....	2	Prolapsus Ani,.....	2
Elongated Uvula,.....	1	Purpura,.....	1
Elephantiasis,.....	1	Pleurisy, .....	1
Erathema,.....	1	Pharyngitis, .....	1
Enlarged Spleen,.....	1	Phthisis, .....	4
Encisted Tumor,.....	1	Phrenitis,.....	1
Enlarged Tonsils,.....	1	Poisoned Wound,.....	2
Fistula in Ano,.....	1	Phlegmasia Dolens,.....	1
Feruncle,.....	4	Prolapsus Uteri,.....	1
Fracture of Ulner,.....	1	Ptyalism, .....	2
Goiter,.....	2	Rheumatism, Chronic,.....	8
Gonorrhœa, .....	4	Rheumatism, Acute,.....	11
Hypertrophy of Heart,.....	1	Remittent Fever,.....	3
Hæmoptisis,.....	1	Rubeola, .....	1
Hæmorrhoides,.....	1	Stomatitis, .....	8
Hysteria,.....	11	Scabies,.....	13
Hepatitis,.....	1	Strumous Ophthalmia, ....	1
Hypertrophy of Liver,.....	1	Spyhilis, .....	22
Influenza,.....	2	Spinal Irritation,.....	4
Intermittent Fever,.....	23	Sore Nipple,.....	1
Iritis, .....	1	Scorbutus, .....	2

Scrofula, .....	9	Uterine Catarrh, .....	1
Sebaceous Glands Diseased, .....	1	Ulcer, .....	9
Teething, .....	3	Ulcerated Cornea, .....	1
Tonsilitis, .....	3	Urticaria, .....	3
Torti Coli, .....	1	Worms, .....	17
Threatened Abortion, .....	1	Whitlow, .....	1
Tape Worm, .....	1	Wound, .....	3
Torpid Liver, .....	1	Wound, Poisoned, .....	2
Varicose Veins, .....	11		

### HOSPITAL RECORDS.

In the October number of the Journal, we commenced the publication of Hospital reports from the Army of Tennessee. They will be found in this and subsequent numbers, until the material is exhausted, from which these statistics are obtained.

As a source of information to many who may feel an interest in examining a record of deceased soldiers in the Confederate Army of Tennessee, as well as in a scientific point of view, we hope to make them useful.

Many of such records having been destroyed, or placed beyond the control of those who seek their publication, it is but justice to the bereaved friends, and to the memory of the dead, that all available material be used for this purpose. In their publication, valuable medical statistics are afforded the scientific inquirer, and as such will be found useful to our readers.

Below will be found reports to 31st December, 1861, as furnished by our valuable contributor, Prof. S. H. Stout:

*Statement of Deaths of Confederate Soldiers at and near Pensacola, Fla., During October, 1861.*

William Calvert pvt. 10th Miss.	Thompson, pvt. 1st Fla.
J. H. Byrum, " 9th "	William Smith, " " "
Joel Williams, " 7th Ala.	J. D. T. Warters, " " "
H. H. Baroum, " 7th Miss.	E. T. Boylston, Sergt. " "
J. C. Cole, pvt. Georgia Battalion.	James Jourdan, pvt. Marines.
W. E. Caldwell, pvt. 9th Miss.	James M. Watson, pvt. 5th Geo.
Thomas Berry, " 10th "	A. R. Carothern, pvt. 5th Geo.
J. D. Sloan, " " "	James H. Biddow, Sergt. 5th Geo.
H. A. Berryhill, " " "	L. C. Hollingsworth, Sergt. Geo. and Miss.
R. W. Wheeler, " 9th Miss.	Thomas Duffie, Corp. 1st La. Inf.
W. Bailey, pvt. 1st Ala.	W. L. Johnson, pvt. 5th Geo.
R. D. Sprowls, pvt. Geo. Bat.	Walter Tuggle, " 5th Ala.
A. J. Martin, " 10th Miss.	Newman Knox, " 7th "
W. C. Weems, " " "	Lewellyn Nelms Lieut. 5th Geo.
James Davis, " La. Inf.	James H. Beddo, Sergt. " "
John Smith, " 1st Ala.	Chas. H. Caton, Corp. " "
Robert J. Hayes, pvt. 5th Georgia.	



John Cluxton, Pvt. La. Inf.	James F. Jones, Pvt. 5th Geo.
Stephen K. Crawley, Pvt. 5th Geo.	Damascus L. Codep, Pvt. 5th Geo.
Henry Tappin, Pvt. La. Infantry.	Fred. F. Cook, " " "
William Holbrook, Pvt. La. Inf.	Jos. F. Adams, " " "
James Curley, " " "	John Staunton, " " "
— Ferguson, " 7th Ala.	Robt. Hays, " " "
William H. McKinnis, Pvt. 1st Fla.	James Smith, " " "
Richard Bradford, Capt. " "	Reuben W. Stewart, Corp. 5th Geo.
William R. Routh, Sergt. " "	Thos. W. Everett, Pvt. " "
Henry Tillinghast, Pvt. " "	Noah Sinclair, Pvt. 9th Miss.
Robt. Hale, " " "	

## RECAPITULATION.

Febris Typhoides.....	13
“ Remittens.....	1
“ Congestiva. . . . .	3
Pneumonia.....	1
Pneumonia Typhoides.....	1
Rubeola.....	1
Dysentery Acuta.....	2
Ascites.....	1
Debilities.....	1
Vulnus Sclopeticum.....	29
Unknown.....	1
Total.....	54

## SUMMARY, OCT., 1861.

Remaining from last report.....	748
Received during the month.....	2,465

Aggregate.....	3,213
Sent to General Hospital.....	833
Returned to duty.....	1,611
On Furlough.....	110
Discharged the service.....	56
Deserted.....	8
Died.....	54
Remaining sick.....	574
Convalescent.....	467

Total Remaining.....	1,041
Mean strength—Officers.....	873
“ “ —Enlisted men.....	6,423

Total..... 6,795

Ratio of Deaths per 1,000, mean strength..... 7.947

Statement of Deaths of Confederate Soldiers at and near Pensacola, Fla., for November, 1861.

W. S. Moore, Pvt. 7th Ala.	H. Neddermeyer, Pvt. La. Inf.
J. W. White, " 9th Miss.	Daniel Farrell, Pvt. 1st Ala.
S. C. Tucker, " 1st Ala.	Walter Handley, Pvt. 1st Ala.
J. T. Lawrison, Pvt. 9th Miss.	J. H. Williams, Pvt. Watt's Regt.
J. C. Hodge, Pvt. 1st Ala.	Wm. McClinton, Pvt. Dra's Regt.
H. A. Parker, Pvt. 1st Fl.	Pleasant Moore, Pvt. Wheeler's Regt.
John Moran, Pvt. La. Inf.	J. M. Turbeville, Pvt. Loomis's Bat.
M. S. Tisdell, Pvt. 17th Ala.	W. T. Powell, Pvt. Loomis's Bat.
George Beasley, Pvt. 36th Georgia.	Jas. H. Higgins, Pvt. Wheeler's Regt.
E. Ripper, Pvt. 17th Ala.	Wm. Russell, Pvt. Wheeler's Regt.
Micle McGuire, Pvt. 17th Ala.	W. Barlow, Corp. Beck's Regt.
G. S. Ducknortte, Pvt. 9th Miss.	Joseph King, Pvt. 2d Ala.

## RECAPITULATION.

Febris Typhoides.....	6
Pneumonia.....	6
Bronchitis.....	1
Dysent-ria Acuta.....	5
Dysent-ria Chronica.....	1
Scorbutus.....	2
Disease of Heart.....	1
Rupture of Bladder.....	1
Vulnus Laceratum.....	1
Vulnus Sclopeticum.....	1
Total.....	35

In addition to the above, by sentence of General Court-Martial, two men of the 10th Mississippi Regiment, were shot to death on the 8th of November, 1861.

## SUMMARY FOR NOV. 1861.

Remaining from last report.....	1,041
Received during the month.....	2,613
Aggregate.....	3,654
Sent to General Hospital.....	206
Returned to duty.....	2,451
On Furlough.....	49
Discharged the service.....	75
Deserted.....	3
Died.....	25
Remaining sick.....	446
Remaining convalescent.....	399
Total remaining.....	845
Mean strength—Officers.....	3,654
“ “ —Enlisted men.....	418
	7,216

Total..... 7,634

Ratio of deaths per 1,000 mean strength..... 3.274

*Statement of Deaths of Confederate Soldiers at and near Pensacola Florida,  
During the month of December, 1861.*

W. J. Williamson, Pvt. 17th Ala.	Wm. Jackson, Pvt. 17th Ala.
W. C. Thompson, Pvt. 17th Ala.	James Falkner, Pvt. 17th Ala.
Jas. W. Shearer, Pvt. 6th Miss.	Wm. F. De Fee, Pvt. 17th Ala.
Thos. Halcombe, Pvt. 1st Ala.	Geo. Hawthorne, Pvt. 1st Ala.
T. Philpot, Pvt. 17th Ala.	A. R. Allen, Pvt. 17th Ala.
L. J. Parker, Pvt. 24th Miss.	J. M. Wright, Pvt. 17th Ala.
J. M. Chamblic, Pvt. 5th Miss.	Wm. Lee, Pvt. 17th Ala.
John Wallace, Pvt. 17th Ala.	F. B. Peck, Pvt. 17th Ala.
T. R. Rosdick, Pvt. 17th Ala.	Dan Swift, Pvt. La. Inf.
H. B. Moore, Pvt. 9th Miss.	T. B. Parham, Pvt. 5th Miss.
John M. Sheppard, Pvt. 17th Ala.	M. W. Smart, Pvt. 17th Ala.
M. G. Farrow, Pvt. 17th Ala.	M. J. Blackburn, Pvt. 17th Ala.
Tho. Porterfield, Pvt. 9th Miss.	A. G. Drummond, Cooper's Rifles.
S. Alderman, Pvt. 5th Miss.	P. Crawford, Pvt. 36th Geo.
Jas. A. Parks, Pvt. 17th Ala.	W. H. Scott, Capt. La. Inf.
T. J. Saunders, Pvt. 17th Ala.	Lewis Harrell, Pvt. 5th Miss.
Som. Vaughn, Pvt. 17th Ala.	Thomas Walker, Pvt. 8th Miss.
N. Y. Ramsey, Pvt. 17th Ala.	Isaac Barnes, Pvt. 5th Miss.
J. H. Johnson, Pvt. 17th Ala.	S. Scarborough, Pvt. 8th Miss.
M. G. Pegler, Pvt. 17th Ala.	John Pate, Pvt. 8th Miss.
John Glenn, Pvt. 17th Ala.	Wil. T. Mickey, Pvt. 10th Miss.
W. Cummings, Pvt. 17th Ala.	

## RECAPITULATION.

Febris Typhoides.....	16
Febris Remittens.....	5
Febris Intermittens.....	1
Pneumonia.....	8
Pneumonia Typhoides.....	2
Rubeola.....	1
Dysentery Acuta.....	6
Diarrhoea.....	1
Bronchitis Chronica.....	1
Cerebritis.....	1
Concusio Cerebri.....	1
Total.....	43

NOTE.—The report for December, 1861, is incomplete. No surgeon was attached to the 24th Mississippi for a part of the month. This regiment suffered from an epidemic—Rubeola followed by Typhoid Fever.

## SUMMARY FOR DEC. 1861.

Remaining from last report.....	845
Received during the month.....	2,553
Aggregate.....	2,398
Sent to General Hospital.....	294
Returned to duty.....	973
On Furlough.....	67
Discharged the service.....	90
Deserted.....	00
Died.....	48
Remaining sick.....	603
Remaining convalescent.....	328
Total remaining.....	931
Mean strength—Officers.....	432
“ “ —Enlisted men.....	7,208
Total.....	7,635
Ratio of deaths to 1,000 of mean strength.....	5.646

## GENERAL SUMMARY FOR THE QUARTER ENDING DEC. 31st, 1861.

Remaining at last report.....	748
Received during the Quarter.....	7,631
Aggregate.....	7,379
Sent to General Hospital.....	833
Returned to duty.....	5,035
On Furlough.....	226
Discharged the service.....	231
Deserted.....	11
Died.....	123
Remaining sick.....	603
Remaining convalescent.....	328
Total remaining.....	913
Total remaining.....	7,379

# ATLANTA Medical and Surgical Journal.

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## ORIGINAL COMMUNICATIONS.

### ARTICLE I.

*Glycosuria—with the Report of a Case.* By W. T. GOLDSMITH,  
M. D., of Atlanta, Ga.

During the month of February, of the present year, a lady, aged 53, of a corpulent habit, sought my advice for what she styled "liver complaint." I found her suffering from marked symptoms of disordered digestion, such as general dyspeptic lassitude after meals, gastrodynia, oppression around the præcordia, sour eructations, and constipation. In early life she had been much troubled by a distressing form of dyspepsia, thought to have been caused by functional disturbance of the liver. In the present instance her rest had been interrupted from inability to sleep, and she seemed to be laboring under general physical and mental depression. Viewing the symptoms as declaratory of dyspepsia, with derangement of the secretory functions of the gastro-intestinal glandular systems, I ordered a cathartic for the relief of the constipation, and when obtained, to be followed by fractional doses of mercury, with an alkali to neutralize the acidity of the stomach. In a few days, the gums having become slightly touched by the mercury, the symptoms disappeared, and the patient was regarded, if not cured, relieved.

A few weeks elapsed, when my assistance was again requested, in consequence of a renewal of the dyspeptic symptoms, but in a modified form. The appetite was good, and improving; there was no distress from pyrosis; no sensation of oppressive weight at the epigastrium; but the constipation was aggravated, and the patient tormented by a violent and insatiable thirst, which was unappeased by the most copious drinks. The tongue was coated white, the skin was harsh and dry, but the pulse natural. Upon inquiry, I learned that much inconvenience was felt from the almost constant desire to void the urine, and that the quantity discharged was unusually large.

Regarding the case as one of probable glycosuria, I requested an examination of the urine, which was found abundant in saccharine matter—so much so as to be plainly perceptible to the taste. The patient was, previous to the first attack, remarkably robust, and had enjoyed almost uninterrupted health since her dyspeptic troubles of early life. When, after the first attack, the most distressing symptoms had disappeared, the appetite had not only remained good, but had increased, notwithstanding the evident marks of emaciation and the consumption, by her, of a larger amount of ingesta. No cause, save that of mental distress, could be assigned as having given rise to the disease.

The diagnosis of glycosuria having thus been clearly made out, the dyspeptic symptoms merited only secondary consideration in the face of the appalling nature of the graver malady; and the treatment sought to be inaugurated was to be based upon strictly physiological principles, to wit: the prevention of the introduction, as far as possible, of sugar into the circulation, by excluding from the dietary all amylaceous and saccharine ingesta, while the distressing dyspeptic symptoms were to be palliated, to the utmost, without losing sight of the more important indication.

The investigations of McGregor, Mialhe, and others, prove, conclusively, that these substances undergo a series of transformations during the digestive process, eventuating in the

formation of sugar, which is discoverable in the portal blood. Bernard supposed that sugar was formed in the hepatic capillaries, from the portal blood. The fact is, however, established, that sugar is formed in the liver during disease. Why it is that saccharine matter is formed by the liver and poured into the circulation in a state of disease, is impossible to say, as we are in almost total ignorance of the destiny of the animal dextrine, in health. The conversion of this substance into sugar is, emphatically, the result of morbid causes; and in our ignorance of any direct method by which its formation may be checked, or arrested, in the liver, or by that portion of the nervous system controlling it, the indirect method is resorted to of withdrawing every article from the dietary from which it is found capable of being formed. No weapon yet drawn from the armory of the *materia medica* has been found powerful enough to reach the disorder in its stronghold, and, with the single exception of dietetic management, no important advancement has been made in the treatment of this formidable malady. Hopeless, almost, in my expectation of affording permanent relief—the lady having been made aware of the fearful character of her disease—the treatment recommended by Dr. Prout was thought the best to be employed. Accepting his classification of alimentary ingesta as sufficient for all practical purposes, one of the indications to be met, as above mentioned, was to exclude, as far as practicable, all amylaceous and saccharine substances as articles of food. The patient was, therefore, restricted, as nearly as possible, to animal diet: and, however severe, as a test of endurance, was its adoption, it is recorded, with pleasure, to the patient's credit, of its faithful observance. McGregor had, as has been stated, by a series of well directed experiments, discovered the important fact of the conversion of all amylaceous and saccharine articles of food into diastase; and Dr. Owen Rees found the saliva capable of effecting a similar transformation. The theory, that in glycosuria the diastase so formed was arrested in its course of transformation in

the circulation to carbonic acid, and the blood thus surcharged with saccharine matter, has been somewhat shaken by recent investigations. The fact seems to be that the diastase is arrested in the liver, and incorporated into the substance of that organ as animal dextrine. But, whatever theory be adopted, the indication of excluding such articles from the diet list is clearly evident from the results of such treatment; for the fact is unquestionable, that no other plan has ever succeeded in effecting a cure in this disorder: and until we discover the means of controlling the formation of sugar in the body, this treatment presents the only hope of combatting it successfully.

The patient was prohibited from using all articles containing starch, to wit: rice, potatoes, bread, turnips, beans, and articles of this class; all fruits; all articles of diet into which sugar entered, as pastries, etc.; also, the livers of animals, because containing animal dextrine. All kinds of animal diet were to be used: meats, wild and domestic, eggs, butter, oil, broths, milk (though doubtful, as containing saccharine matter), soups, and jellies (without sugar) were to be used in any quantity, and prepared in any way suited to the taste. Cabbage and turnip salad being found to contain but little, if any amylaceous matter, was to be used without restriction. The only form of bread permitted was buckwheat cakes, in moderation, at breakfast; to be eaten with the largest quantity of butter possible.

For the relief of the constipation small portions of ipecac and rhubarb, combined into a pill, were to be taken after each meal. The most prominent symptom—thirst—in the case, was to be relieved. Dr. Prout's suggestion of employing tepid drinks to the exclusion, as far as possible, of all others, was adopted, and phosphoric acid, as recommended by Dr. Latham, used. Both were unavailing, and finally the patient was put upon a decoction of uva ursi, and this, in the end, abandoned. She was, however, restricted, as far as the utmost self-control would allow, in the use of all drinks. Thirst, of all the symptoms of glycosuria, is the most

distressing. It depends, no doubt, upon the presence of sugar in the circulation; for this, like every other crystalloid substance, when present in the blood, imperatively demands an amount of water sufficient for its dissolution and elimination from the body. The presence of such a substance permanently in the blood produces, among other effects, a dehydration and disintegration of the tissues which no amount of water introduced into the system can prevent: for it has been proven, by the experiments of Genth, Bocker, and others, that disintegration of the tissues is accelerated by simple transudation of water through the body, and the resulting waste can only be compensated by an increased supply of food. Thirst, therefore, as a symptom of glycosuria, is never removed so long as the disease lasts, disappearing only when the disorder, upon which it is dependent, is cured.

In order to fortify the system against the rapidly progressing emaciation, iron by hydrogen, and cod-liver oil were administered: the former in doses of grains vi, per diem, and the latter to the full extent of stomach toleration.

Emaciation, so characteristic of glycosuria, seems to depend upon several causes: upon impairment of primary digestive assimilation; upon derangement of the secondary assimilative forces; from dehydration and disintegration of the tissues from saccharine matter in the blood, and the water necessary for its dissolution; from the transformation of the liver dextrine into glucose; from the conversion of the adipose tissue, by the liver, into sugar; and, probably, from the interruption of the function of the liver as a blood-making organ.

The improvement, under the treatment employed, in the quantity of sugar in the urine, was immediately perceptible; but the thirst, the emaciation, and the immoderate appetite continued for a length of time. After the expiration of nearly three months, a gradual improvement in every symptom was effected: the constipation had been removed; the thirst had abated; the strength and flesh had increased;



the dry and harsh skin had softened ; and the urine freed from sugar. The treatment was still continued, and a gradual resumption of the former diet permitted ; so that after, the expiration of from four to five months, the lady had returned to her usual dietary habits, and was relieved from all medication.

The favorable termination of the case in health, corroborates the assertions of those most acquainted with the disease, that the prognosis in the corpulent and the aged, is not so grave as in the young, the slender, and delicate. The prognosis is, however, in all cases, highly unfavorable. Glycosuria in persons under twenty years of age is uniformly fatal. Diabetic urine may attend those advanced in years for a long period of time without making material inroads upon the constitution. M. Dechambre thought it was a normal result of old age. The disease, in a majority of cases, is decidedly a chronic disorder ; and in inverse ratio to the length of time the symptoms take to complete the full development of the malady, will be the mildness or severity of the disorder—suddenness of attack being less formidable than those cases making almost imperceptible progress, and extending over a considerable period of time.

It is but proper to add, that the density of the urine was not ascertained at any period during the treatment of the case. A specific gravity bottle, or a urinometer could not be obtained. But as the specific gravity of diabetic urine is always increased, depending solely upon the saccharine matter contained, the information revealed by the urinometer is only important in long and protracted cases, where it is desirable to note the quantity of sugar held in solution from day to day.

After the favorable termination of the case, a small tumor was discovered growing rapidly on the cheek under the right eye. It was immediately removed by excision, and the wound cauterized with nitrate of silver. In another month it had returned, growing more rapidly, and it was again removed by excision, with a quantity of the adjacent

healthy tissue. Both the parents of this lady had cancer—the father having died with it. The mother still lives, likely, however, to meet the same fate. It was the desire of the writer to use De Morgan's chloride of zinc solution for the destruction of cancer cells—should such prove the character of the tumor—but none was obtained. The wound has, however, healed kindly, with no indication of a return of the tumor up to the present writing.

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In making the above hasty report of a rare disease, at the request of the senior editor of this Journal, it may not be deemed improper, before dismissing the subject, to give a brief résumé of some of the recently developed physiological and pathological facts in regard to so marvelous a disorder as glycosuria. Sugar, as is well known, is not a natural constituent of the blood, like urea, to be discharged by the kidneys. Its presence in the blood of the systemic circulation, does not always indicate a morbid condition, as it is possible to conceive that the liver may fail to effect the necessary conversion of grape-sugar into dextrine, independent of diseased action, in consequence of over-indulgence in the consumption of amylaceous and saccharine ingesta. A modified form of glycosuria occurs frequently as a complication in other diseases; the saccharine matter, however, is small in quantity, appearing only for a short period, unattended by grave symptoms, and innocent in its results. Such instances of saccharine urine occur frequently from the administration of chloroform and ether; after paroxysms of epilepsy, asthma, and whooping-cough, and after the introduction of poisonous substances into the blood, as strichnia and woorali.

But the disease, clinically known as diabetes melitus, or, the better term, glycosuria, is a grave constitutional malady, stamping its effects upon almost every tissue of the body, and having for its starting point a mal-transformation of a

mysterious principle imbedded in the hidden recesses of the liver. Just here an important query arises. What is the cause of this fearful malady? When we trace the history of glycosuria from the time when saccharine matter was first detected in the urine; or from the time when McGregor crowned his investigations by the discovery of diastase in the food after digestion; or the more recent researches of M. Mialhe, upon the transformation of all amylaceous and saccharine ingesta into diastase by the action of saliva; or the still later discoveries of Bernard, Schiff, Pavy, and McConnell of the amyloid substance of the liver,—the accredited causes of this disorder have been as numerous as they were wide of the truth. To exhume the speculations of "the fathers" from the tomb of a departed physiology, in this favored age of microscopic research, would be idle and unprofitable. The very obscurities that veiled the disorder, acknowledged on every hand, furnished inviting fields for ingenious theories, and patient investigation was called upon to unfold the secrets of one of nature's most astounding perversions.

With the lights, however, recently thrown upon the cause of glycosuria the conclusion is logically reached, that it is due to a lesion of a particular portion of the nervous system controlling the vascular system of the liver, by which a peculiar ferment of the blood is brought in contact with the amyloid substance of that organ, resulting in the formation of sugar, and a pouring forth of that substance into the circulation. The lesion of the nervous system is the first link in the chain of causation; the second is in the liver itself, from which flow those characteristic symptoms marking the disease, such as functional disturbance of that organ; general emaciation, from faulty nutrition of the tissues; and a train of dyspeptic symptoms so declaratory of an impairment of the assimilative forces. The cause of glycosuria is, therefore, so intimately connected with its pathology, that we will turn our attention to the particular physiology of the liver, latterly taught, bearing upon the subject, that we

may the more readily comprehend its perverted action in this malady. Until recently, the most interesting theory, in regard to glycosuria, related to the liver as a great sugar-forming organ; and the results of the investigations of Bernard, in this direction, seemed so conclusive, that all physiologists accorded to him the honor of a great discovery. They were not slow in adopting so fascinating, and withal, so intelligible a theory as that first promulgated by this great physiologist. The first series of experiments of Bernard seemed to establish the fact, that saccharine matter was being constantly formed in the capillaries of the liver, and discharged into the hepatic veins. But even this great master had occasion to modify his first hypothesis. He found that the saccharine matter in the portal veins, in passing through the liver, was transformed, and incorporated into the substance of the organ: from the fact, that the sugar detected in the hepatic veins could not be formed directly from the blood, as this was discovered to take place after the removal of the viscous from the animal. Whereupon, another addition was made to the first theory, that the liver contained a peculiar substance capable of conversion into sugar: and as this conversion was found to take place in the liver, when removed from the body, a blood ferment was thought to be necessary in order to effect the transformation. The first supposition of Bernard was, in part, based upon truth. The conversion of amylaceous and saccharine ingesta into diastase is unquestionable. Grape-sugar, formed from these articles, was discovered, in the portal circulation, entering "the gate of the liver." It was found beyond, in the hepatic veins. He found, also, that when no diastase could be detected in the intestines or in the tributary veins of the vena portæ, in animals deprived for hours of amylaceous and saccharine food, that sugar was discoverable in the intralobular veins of the liver; and because of the fact, that sugar was detected in these instances, in the portal blood, just before its entrance into the liver, as well as in the hepatic veins, it was conjectured that the formation took place

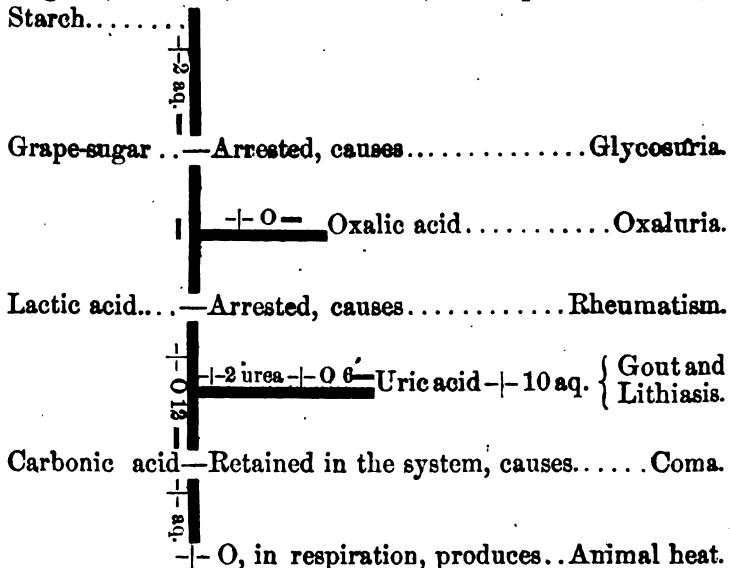
in the hepatic capillaries, and by reflux, passed into the vena portæ, there being no valves in that system to prevent such action.

We have seen that the transformation of the amylaceous and saccharine articles of diet into diastase is unquestionable. It may not be amiss, in this place, to inquire—how is this conversion effected? So far as the stomach is concerned in the process, the prevailing theory was, that “starch in the stomach passes first into dextrine, then into grape-sugar, and ultimately into vegetable, or carbonic acid” in the circulation: and in explanation of this process, it was supposed that “some matter is probably secreted with the gastric juice, which disposed to the generation of sugar out of alimentary substances, as diastase disposes to its production out of starch in the process of germination.” We will notice Lebig’s chemical theory hereafter. Dr. Owen Rees thought “that the importance of the saliva had been underrated” “as an active means of effecting the transformations in health;” and in reviewing the researches of M. Mialhe upon the prominent part taken by the saliva in the conversion of these substances into dextrine, remarks that, “the importance of this discovery, with reference to the pathology of diabetes, will at once occur to every mind; and if this constituent of the saliva is alone concerned in the digestion of amylaceous and saccharine ingesta, or in any way necessary to the result, it would seem that the disease should be investigated with relation to the condition of the salivary glands; a point of view in which it has never yet received the attention of pathologists. M. Mialhe, in a paper on diabetes, has stated it as his belief, that saccharine and amylaceous principles are partly assimilated by an action consequent on admixture with the alkaline matters of the blood.” Whatever part the saliva may play in effecting the conversion of alimentary substances into diastase, the isolated fact is proven, that such transformation does occur during the digestive process. The further fact seems also established, by recent experiments, that these series of transformations

result in the accumulation in the cells of the liver, of that peculiar principle, animal dextrine. That these transformations serve some ulterior purpose in the animal economy, can not be doubted. What further metamorphosis transpires in the laboratory of the liver in health, from the amyloid substance, can not now be determined. Bernard, as already stated, supposed it to be the conversion of this substance into sugar; and he also entertained the opinion, that a further transformation, resulting in fat and lactic acid, occurred, by which the adipose tissue of the body was nourished, and a material gradually furnished the respiratory organs for oxygenation for calorific purposes.

But modern chemistry, under the intellectual leadership of Lebig, has brought its investigations to bear upon this interesting subject. Lebig contends that the transformations already mentioned are so many chemical changes, through which these substances pass in the blood, for the ultimate purpose of maintaining animal heat. The liver, with its animal dextrine, has no place in his theory—the circulating fluid holding the elements in readiness necessary for the progressive changes to be accomplished. Starch, he thinks, upon its introduction into the circulation, after the digestive process, taking “two equivalents of water, becomes grape-sugar; next this changes into lactic acid, which is isomeric with it; and this again combines with twelve atoms of oxygen to form carbonic acid and water. This last change is a process of combustion, and thus produces heat. The oxygen needed for it is absorbed from the air” during the respiratory process. Lebig thought that he discovered in these transformations the true cause of glycosuria, for it is clear if an arrest in the normal direction of these changes should occur at the period of the formation of grape-sugar—giving credence to the theory upon which it is predicated—the blood would become, by such arrest, charged with sugar. It could not be employed usefully for any purpose of the body, and would consequently be discharged through the kidneys. He also thought there was a manifest connection

between a number of diseases depending upon either an arrest or perversion of these transformations. Rheumatism was supposed by him to result in consequence of an arrest at the point of the formation of lactic acid. Grape-sugar, by being oxidized, would give oxaluria. Lactic acid, before passing to carbonic acid, if met by two equivalents of urea, and 6 of oxygen equals uric acid, and ten equivalents of water, would result in gout and lithiasis. The following diagram, modified, from Headland, will explain his theory :



It will be seen, upon examination of the above diagram, that the perpendicular line indicates the healthy changes through which starch is supposed to pass to fulfill its destiny—the production of animal heat.

The arrest or departure from the normal direction of these transformations must result in disease. "Thus, at each of the two transitional stages, we might have one diseased condition produced by an arrest of the process, and another by its deviation. These deviations and stoppages may result from a failure of some natural principle, which is gifted

with the control and direction of the series of transformations; or they may simply be traceable to a want of vital energy or nervous force.”\*

But, reverting to the discoveries of Bernard, Schiff, and others, it appears that the liver not only controls and appropriates the grape-sugar formed from the amylaceous and saccharine articles of food, but that in the absence of these substances (or of grape-sugar in the portal blood), the liver is capable of transforming the oleaginous articles into sugar. This seems always to be the case in fatal glycosuria. It is equally certain that this wonderful organ has the power of converting these articles into fat. Both conversions may take place independent of the presence of the oleaginous,

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\*The catalytic treatment of rheumatism would seem to afford presumptive evidence of the correctness of the chemical theory of Lebzig. This disease on all sides, is supposed to be due to an acid condition of the circulating fluid. That this acid is the lactic, seems to be proven independent of the theory, from its having been discovered, excreted occasionally, by the skin, in arthritic disorders. Should future researches demonstrate its certainty, the formation of the acid upon Lebzig's theory, would still be far from being established. The catalytic treatment is an isolated fact, separate and distinct from the theory. The great catalytics in rheumatism are, colchicum, nitro-hydrochloric acid and lemon juice. Nitro-hydrochloric acid is, perhaps, the most powerful oxidizing agent known. Given in rheumatism, it is supposed to effect, by its oxidizing power, a speedy conversion into carbonic acid, which, but for the rapid generation of lactic acid in the system, would promptly arrest the disease. For the same reason lemon juice was found highly valuable by Dr. Rees in rheumatism. Its remedial action evidently depends upon its citric acid. By contrasting the formulæ of lactic and citric acids, it will be seen that the citric acid introduced into the blood of a rheumatic, would exercise an oxidizing power, being a carrier of oxygen, and so expedite lactic acid towards its transformation into carbonic acid. Their formulæ stand:

Lactic acid,  $C_6H_5O_5 - H_2O$ .

Citric acid,  $C_{12}H_5O_{11} - 3H_2O$ .

However apparently paradoxical, chemists will hardly fail to discover the elements of sound doctrine in the above statement.

The restorative treatment, in rheumatism, by the introduction of alkalies into the blood, however seemingly opposed to the principles of the catalytic, is not so in fact. They are, perhaps, equally valuable as remedial agents in this disease. Wohler has proven that a "vegetable acid becomes oxidized when given in combination with an alkali. So that if we introduce into rheumatic blood a free alkali, a lactate of potash, or of soda will be formed; this may then be enabled to oxidize into a carbonate, and the natural process be completed."

The whole subject is replete with interest, and will, doubtless, receive, at no distant day, that attention for its more perfect elucidation, its great importance so manifestly demands.



amylaceous, or saccharine articles in the food of the animal—a fact due, in all probability, to the animal dextrine in the liver.

Other physiologists, not accepting in full the recently improved theory of Bernard, have advanced a step further in their investigations. Bernard, although capable of demonstrating, by isolation, the existence of a particular substance termed liver dextrine as present in the liver, failed to fix its precise seat in the organ. It was thought to be diffused throughout the substance of the liver, and its existence demonstrated, not by being detected in the organ, but by isolation from it. Liver dextrine is very abundant in the oyster. It can be easily procured, and in great purity from "the large fawn-colored mass," which is the liver of this mollusk. It may be obtained by the following method: Take a fresh oyster, and holding it over a small vessel of boiling water, clip off, with a pair of scissors, the dark-colored portion, letting it drop in the water. The mass becomes hardened; it is dried and pulverized; after which it is mixed with a small quantity of water, and boiled, and then filtered, and poured into five times its bulk of strong alcohol. A large quantity of a snow-white substance is precipitated, which is the amyloid substance, or animal, or liver dextrine. It is an inodorous substance, dissolving freely in water, and while the salts of copper are not reduced by it, nor will it ferment with yeast, it is transformed readily into glucose, by contact with warm saliva, pancreatic juice, diastase or fresh blood. It is worthy of remark, that although its apparent chemical composition is almost identical with vegetable dextrine, its reaction is not exactly similar. Like vegetable dextrine, it yields a deep wine red coloration with iodine. It is converted into glucose, as stated, by contact with fresh blood, which is not the case with either starch or dextrine. This singular property of the amyloid substance is its most important feature, in its relation to glycosuria, and suggested a series of experiments which resulted in the discovery of a peculiar princi-

ple circulating in the blood, called a ferment, which, when brought in contact with the liver dextrine, effects the transformation of that substance into sugar. Schiff and Nasse have, by experimentation, discovered the exact location and physical condition of the amyloid substance in the liver: the former in the livers of frogs; the latter in those of warm-blooded animals. It is found, not dissolved in the hepatic tissue, but in granules, precisely as it occurs with starch, collected in separate vesicles in the liver cells, which, besides the one or two nucleii and fatty globules, contain an immense number of these pale, minute vesicles, within which the amyloid substance is accumulated.

For the better understanding of the exact location in the liver, of this substance, it may not be altogether improper to advert, for a moment, to the minute anatomy of the organ as taught by late physiologists. The vascular arrangement of the liver is well understood. The portal vein entering the transverse fissure, at the base of the organ (in common with the hepatic artery and duct), subdivides until each lobule is more or less surrounded by a venous plexus derived from this source. The capillaries of the hepatic artery inosculate with those of this plexus—never with those of the intra-lobular veins. From this net-work of blood-vessels of the portal venous system, capillaries radiate towards the centre of the lobule, and are met by the capillaries of the intra-lobular vein, radiating towards the periphery of the lobule. The cellular structure is also found radiating from the centre to the circumference of each lobule, lying between the meshes of the vascular net-work. Microscopic anatomists were long undetermined as to the disposition and arrangement of these cells in the lobules. Kolliker, Handfield Jones, and Dr. Carpenter, thought they were not invested by a basement membrane, but placed “end to end, forming solid cylinders,” having no immediate communication with the bile ducts, which were supposed to jut up, by cecal extremities, upon the peripheries of the lobules, while the biliary secretion was transmitted, by transu-

dition, from cell to cell, passing, finally, into the biliary ducts. From analogical deductions, other anatomists thought the cells must be enveloped by a basement membrane; and the fact was ultimately proven to exist by the experiments of Prof. Beale. He injected this membrane, forming a tubular structure surrounding the cells, and found the injection to pass around and enclose them. These cells compose, chiefly, the substance of the liver, and are those from which the bile is elaborated. The secretion is first poured into the interior of the tubular membrane, and then into the biliary ducts, which are continuous with the tubular structure. These cells, according to Todd and Bowman, vary from one thousandth to two thousandths of an inch in diameter. Each cell contains one or two nucleii, with numerous fatty granules, and from the microscopic researches of Schiff and Nasse, the minute, pale vesicles, in which is accumulated the amyloid substance.

When the liver of a recently killed animal is left to itself in a warm place, it will be soon filled with sugar. This occurs when the animal has been deprived of all amylaceous and saccharine ingesta. Should it then be thoroughly washed of its saccharine matter, and left in a warm place, as before, it will again be filled with sugar; and this process of transformation will continue until the liver dextrine shall cease to exist. This process is of easy demonstration in the liver of the oyster; and has also been found to take place in the livers of warm-blooded animals. It appears evident, therefore, that a considerable quantity of amyloid substance exists in the liver, accumulated in the cells of the organ, and that the peculiar ferment of the blood is in close proximity to the animal dextrine, in health, and is brought into immediate contact with it, after death.

The animal dextrine, as has been remarked, has been found in the livers of all animals, in health, when recently killed. But it readily disappears under a variety of circumstances and diseased conditions. It is rarely, if ever, detected in the human liver. It could only be found in the livers

of those dying suddenly, as it disappears under the influence of disease, during protracted illness.

The peculiar ferment of the blood, which has been supposed necessary for the conversion of liver dextrine into sugar, has never been demonstrated to exist by isolation. The fact, however, of its existence can not be doubted. This is proven by the fact already noticed, that the process of transformation of the dextrine into sugar continues after death, when all vital activity has ceased. This process continues even after every trace of sugar has again and again been washed from the organ. It has been further proven by the remarkable fact in regard to the periodical absence of this ferment, in the blood of frogs. According to Schiff, it has been found to disappear from these animals "during the recent half of winter and the early spring months. This occurs as a regular event in the annual changes which these batracians undergo. During this interval, the liver is as full as usual of amyloid substance; but no spontaneous production of sugar occurs, when the organ is abandoned to itself in a warm place: and artificial glycosuria cannot be engendered in such animals. When, however, the blood of another animal, which is not in this peculiar condition, is injected into the bodies of frogs, or applied to their livers, the usual production of sugar takes place rapidly."

It has not been positively determined what special mission animal dextrine subserves in healthy life. The liver is supposed to be, by some very eminent physiologists, a blood-forming organ. Weber discovered in the liver of the embryo abundant generation of blood-corpuscles—a fact confirmed by Kolliker. Weber believed that the liver separated and appropriated in its substance, a material from the blood, from which blood-corpuscles were generated. This seems fully susceptible of proof in the liver of the embryo chick—blood-corpuscles being elaborated from the yelk-globules in the liver, and poured into the circulation. A similar metamorphosis, as in that of the chick, was observed by Weber to occur in the frog in the spring of the

year. In view of the facts bearing upon the subject, Todd and Bowman suggest the query, "whether the liver may not afford a source of supply of blood-corpuscles, or contribute to the production of hæmatine in adult life?" In response to the inquiry suggested, they answered: "It has often struck us that this question might be answered in the affirmative, while observing cases in which the process of the formation of blood seemed greatly perverted, when no organic disease could be detected beyond some degree of enlargement of the liver. Patients suffering in this way are pale, as if from loss of blood, although no such loss had been experienced: their nutrition is enfeebled, digestion impaired, and there is slight yellowness of the complexion, as in cases of hepatic disease; and, after death no lesion is discoverable, but slight enlargement of the liver."

It is known "that the venous blood of the spleen passes along with that from the stomach and intestines through the liver. Recent researches of Kolliker and Ecker offer some explanation of this fact, and at the same time of the relation between hæmatine and the coloring matter of bile, as well as between the office of the liver, and the generation of the red particles of the blood. It would appear from these researches," "that the red blood-corpuscles undergo decay in the red substance of the spleen, giving up their hæmatine, in an altered form to the portal blood, from which it may not improbably, as Kolliker conjectures, pass into the bile-cells to form, and to be eliminated as the biliary coloring matter; and, perhaps, also to contribute to supply hæmatine to new blood-cells developed in the liver."

Should these conjectures prove to be correct, it would appear that the liver and spleen have functions somewhat in common, as blood-forming organs. They have the glyco-genic power in common, as the spleen has been found to be, to a limited extent, a sugar-forming organ. The corpora amylacea of the spleen were, by eminent physiologists, supposed to be the seat of the substance capable of transformation into sugar. Salisbury, however, in a series of late

investigations, asserts that these bodies are neither allied to starch or cellulose. But that the spleen is a sugar-forming organ, is admitted by him in the following language: "When the spleen of the common fowl is set aside, exposed to conditions which induce decay"—just as occurs in experiments with the liver—"in connection with the decay which takes place, alcoholic fermentation sets in, which develops *torula cells and filaments* in considerable quantities, producing in a short time a white mould, or dust, of cells and filaments over the whole surface. These *torulæ cells* are smaller than those developed in fermenting liver, but of the same general character. The development of these cells in the decaying spleen is an indication of the presence of glycogenic matter, or sugar, in some form, and which is probably generated by it."

The spleen is found also to elaborate from the myoline cells, cholesterin, which, being conveyed by the portal blood to the lobular structure of the liver, is secreted as one of the constituents of the bile. A late writer affirms "that a careful examination of the substance of the liver has determined the fact, that cholesterin and serolin are not formed in the cells of this organ, but simply secreted by the biliary apparatus." These facts, which may seem irrelevant to the subject, are introduced in order to show the intimate physiological connection between the liver and the spleen. They would seem to give some foundation to the opinion that the amyloid substance of the liver may be in some way concerned in the perfection of the blood and the secretion of bile in health; and that one of the results of glycosuria in producing rapid emaciation, may be due, in part, to the suspension or interruption of this function of the liver.

McConnell, "in his recent memoir on the functions of the liver, brings forward some facts and considerations of great weight in support of his view, that the great destiny of liver dextrine is to unite with nitrogen (set free by the disassimilation of fibrin and a portion of the albumen of the portal blood) so as to constitute a new protein compound

resembling cassin, which is being constantly poured into the circulation through the hepatic veins."

Bernard was of the opinion that a constant transformation of the amyloid substance into sugar was one of the functional duties of the liver: that while this organ was secreting bile, and pouring it into the biliary ducts in one direction, the dextrine was being converted into sugar, and poured into the intra-lobular veins in the other. But, however ingenious and seemingly conclusive the glycogenic theory of Bernard, and the experiments upon which it was based, other investigators, as Prof. Roberts and McConnell, have proven that such transformation takes place only during disease, or in the newly killed animal, and never in health. The glycogenic theory rested mainly upon the fact, that in recently killed animals the blood of the hepatic veins contained a larger and richer supply of sugar than that of any other part of the body. Pavy discovered that the appearance of sugar in the hepatic veins resulted from the rapid transformation of the dextrine, in consequence of the injuries sustained by the animal during the performance of the experiment. He changed the mode of operating, so as to avoid, as far as possible, all disturbing causes; and hepatic blood so procured contained no more sugar than other and remote portions of the circulation. McConnell repeated and improved these experiments, obtaining "results which do not seem to admit a possibility of doubt, that amyloid substance is not converted into sugar during healthy life." Roberts has also repeated these experiments, and has never been able to detect the slightest trace of saccharine matter in the livers of frogs and oysters while in health.

From the above review of this important part of the physiology of the liver, we are somewhat prepared to inquire into the pathology of glycosuria. We will give, therefore, what seems to be the most plausible theory, in accordance with the facts, as to the pathological condition necessary for the production of this disease. We have seen from the experiments of Pavy, McConnell, and others, that the

amyloid substance in the liver is never transformed into sugar during health. This substance is always found in the liver; and the peculiar blood-ferment is never, under favorable circumstances, absent. We find, then, a principle in the blood, carried perpetually through the liver, in close proximity to its amyloid substance, capable of instantly effecting a conversion of its dextrine into sugar; and yet, this transformation never occurs except as the result of disease, some abnormal condition, or after death.

The query immediately suggests itself: What pathological condition is necessary to bring in contact the blood-ferment and the amyloid substance? The solution of the question would unfold the whole pathology of glycosuria. It can not be answered fully; but some glimmerings of the truth have been seen, and the day may not be far distant when it shall be revealed in all its grandeur to the earnest inquirer. The obscurities that, in many particulars, envelope the physiology of the liver, is an impassable barrier to the study of the pathology of a disease so intimately connected with the healthy action of the organ. Could we unfold the varied processes and transformations effected in this wonder-working viscus, and that still more wonderful tissue, the circulating fluid, we might hope to unravel the secrets that now shroud the subject in mystery.

The experiments of physiologists, in the production of artificial glycosuria in animals, have thrown a flood of light upon the subject. Glucose urine may be engendered in various ways. M. Reynoso found the urine saccharine in persons who had been under the influence of chloroform and ether: he also discovered it in the urine of patients laboring under "tuberculosis, pneumonia, chronic bronchitis, asthma, asphyxia, hysteria, and epilepsy; and after the use of various medicines, as opium and other narcotics, quinia, mercury, etc." It is also caused by impeding the respiration; by poisoning with strychnia and woorali; by tying the afferent veins of the kidneys; by thrusting needles in the liver, and by injecting acids into the portal veins. Reynoso "is



disposed to think that whatever interferes with the respiratory process, whether directly, as diseases of the chest, or indirectly, through the nervous centers, as nervous affections and narcotics, may produce this effect." Diabetic urine was noticed by Becquerel in cerebral, spinal, and hepatic diseases. Organic diseases of the brain and spinal cord have recently been shown to occasion glycosuria. Cerebral hemiplegia, in a case of Pavy's, excited the disease. Dr. Gull discovered sugar in the urine of a patient after having an apoplectic fit. Fritz has collected a number of cases occurring after cerebral softening, tumors of the pia mater, general paralysis, and myelitis. Numerous cases have occurred, resulting from external injuries of the brain and other parts: these injuries consisting in blows and falls on the forehead, occiput, vertex, fractures of the vertebræ, etc. Some of these injuries induced permanent glycosuria; others were transient, subsiding with the cerebral or other symptoms. These apparent multifarious causes of the disease afford special interest, as bearing on the discoveries of Bernard, Schiff, and Pavy, in the production of artificial glycosuria in animals by cutting and puncturing different portions of the nervous system; and these experiments seem to develop the fact, that all injuries sustained by the brain and spinal cord, harmonize with all other causes producing glycosuria, and that they depend upon irritation being applied, directly or indirectly, to some portion of the nervous system controlling the vascular system of the liver. In all diseases impeding the respiration, or when narcotism or anæsthesia is produced by medicines, the irritation is conveyed through the pneumogastric nerves, and reflected to the liver; strychnia acts directly upon the spinal cord, involving the nerve fibres proceeding to the liver. Diseases and injuries of the brain and spinal cord, either by direct irritation or reflex action, influence the nerve-arrangement of the organ, and so, however varied the points of departure, the focus of the disease must be looked for in some centre of the nervous system.

Bernard, with wonderful skill, punctured the floor of the

fourth ventricle of the brain. When a particular spot of the floor was irritated, a copious secretion of urine was immediately set up. When another portion was wounded, midway between the origins of the auditory nerves, an instant discharge of sugar was poured into the circulation, and the urine became saccharine. The liver would seem, then, to be "under the control of a distinct nerve-arrangement, with a local centre in its neighborhood (probably the *cœliac ganglion*), and upward prolongations, by the sympathetic and spinal cord, into the cerebral centres. The separate threads of this communication are, in the lower parts of their course, placed widely apart; but they approach in the spinal cord, and in the floor of the fourth ventricle are collected into a close bundle before their final dispersion into the cerebral hemispheres." Irritation, applied to any portion of this nervous route, causes, at once, the immediate production of glycosuria. The great difficulty of puncturing the precise spot in the ventricle induced Schiff to cut the entire cord, at the points of origin of the brachial nerves, which was always attended by the appearance of sugar in the urine. It is not difficult to conceive that irritation, congestion, inflammation, or pressure of the *cœliac ganglion*, might produce a similar result. Such, no doubt, is the case.

The vascular system of the liver, like that of every other part, is under the control of a special portion of the nervous system. We have seen that the nerve-fibres, starting from the fourth ventricle of the brain, pass to the liver and kidneys. This distribution seems to be exclusively to the coats of the blood-vessels of these organs. The muscular tissue constituting the circular and longitudinal coats of these blood-vessels, are, by this nerve-arrangement (*nervi vasi motores*), provided for an active contraction of their calibres. The negative power of expansion is equally active under the pressure of the blood, when the contractile tissue is paralyzed, and by the elasticity of their coats. In polyuric subjects the renal vessels seem to be paralyzed, and in glycosuria the muscular fibres, both circular and longitudinal,

are in a paralytic condition. In the one case, copious diuresis ensues; in the other, instant contact of the blood-ferment with the amyloid substance occurs, and sugar discharged into the hepatic veins. All the diseased conditions, however various, resulting in glycosuria, can be accounted for upon this theory, which accords both with experiments upon animals and clinical experience.

Why it is that paralysis of the contractile tissue of the hepatic blood-vessels brings in contact the blood-ferment and the liver dextrine, has not been determined. It has been thought to be consequent upon the hyperæmia induced, and, possibly, by a saturation, more or less of the cellular structure, with the blood-ferment, and to a dissolution, to some extent, of the cells containing the amyloid substance; or, to loss of function of the vascular system paralyzed, controlling the secerning office of the liver, and disturbing the normal constituents of the cells. But great hyperæmia may exist in the liver without the appearance of sugar in the urine; and, even in cases of temporary glycosuria, upon the supervention of positive pyrexia, the glycogenic condition is suspended. We are, however, justified in asserting, that the only known pathological condition for the production of glycosuria is to be found in a lesion of a particular portion of the nervous system controlling the vascular system of the liver; and, although we may not, in every case, discover the precise spot involved, the fact is nevertheless conclusive, that the effect upon the contractile tissue of the hepatic blood-vessels is always the same—i. e., paralysis of the muscular coats, followed, perhaps, by hyperæmia.

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Notwithstanding the length of this article, we do not feel that we should close without referring to the methods employed for the detection of sugar in the urine. When glycosuria is well developed, the urine may, for all practical purposes, be considered a solution of grape-sugar in water—being chemically identical with this substance, or glucose. The other constituents are vastly disproportioned in compari-

son to their normal proportions, in the urinary discharge. When sugar is present in the urine it may be easily detected; but the usual methods of procedure—from the want of the necessary cautions, or from a want of information as to the manner of their application—are liable to many errors. Saccharine matter has often appeared to be present, when tested for, when none existed; and, on the other hand, a large proportion of sugar may be in solution in the urine, when the tests employed fail to reveal it.

It is our purpose, then, to examine, briefly, some of the usual methods of sugar testing, and show why, as commonly employed, they are subject to fallacies. “When the flow is considerable” in glycosuria “the urine has a very pale straw tint, and a peculiarly bright aspect. It speedily becomes opalescent when exposed to the warm air, and in a few hours ferments, with abundant disengagement of gas, and production of sporules and filaments of the yeast plant. These latter form a white flour-like deposit in diabetic urine, after it has been kept awhile.” The appearance of the yeast plant in the urine, is not, however, conclusive of the presence of sugar in the secretion: for *torulæ* are not confined, exclusively, to saccharine urine. The yeast plant may grow to full fructification in the urine without the most delicate tests being sufficient for the detection in it of sugar. This remarkable vegetation (*torula cerevisiæ*) undergoes almost the same phases of development as that of the mould fungus (*Penicillium glaucum*). They are both found running through three phases to the period of full development: the first phase is in oval cells or sporules; the second, in interlacing fibres or thallus; the third, the development of the plant growing in the air, or, ariel fructification. It is only in the third and last phase that the yeast plant can be distinguished from the mould fungus. In the yeast fungus the stalk—in the phase of ariel fructification—terminates in a spherical head full of sporules: the mould fungus in the same phase has a tuft of branches proceeding from the stalk. So similar are they in their features, that they are not of easy

discrimination. It will be seen, therefore, that the reliability of *torulæ*, as indicative of the certainty of the saccharine quality of the urine, is far from being true; yet, in some of our text-books, it is stated to be so, without qualification.

The boiling of liquor potassæ with urine—called Moore's test—cannot be relied upon in every case, in revealing sugar when present in the urine. It is wanting in delicacy, as it requires a grain and a half of sugar to the ounce of urine, before it can be made available. A patient may have incipient glycosuria, and this test fail to discover the fact. The fermentation test is inferior to that of Moore's, as it requires two grains and a half of sugar to the ounce of urine, before detection is possible.

Reduction tests are by far the most delicate and reliable. They are, however, frequently fallacious, from a want of care, and a knowledge of the proper method of proceeding. When employed as commonly recommended, Trommer's test is as unreliable as those referred to above. The urine, according to many of our text-books, is first to be boiled, and the solution of copper added: while the solution of copper, not being prepared according to the proper standard, is either above or below the proper strength. The following plan for sugar testing with copper, is the one adopted by an eminent English chemist, and superior to all others known to the writer: "Pour some of the prepared test-liquor\* in a narrow test-tube, to the depth of three quarters of an inch; heat until it begins to boil; then add two or three drops of the suspected urine. If sugar be abundant, a thick, yellowish opacity, and deposit of yellow suboxide are produced (and this changes to a brick-red at once, if the blue color of the test remain dominant). If no such

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\* The prepared test-liquor, or Fehling's standard copper solution is prepared according to the following formula:

Sulphate of copper.....	gr. 90½
Neutral tartrate of potash.....	" 364
Solution of caustic soda, sp. grav. 1.12.....	f. oz. 4
Add water to make exactly six fluid ounces.	

reaction ensue, go on adding the urine until a bulk nearly equal to the test employed has been poured in: heat again to ebullition; and, no change occurring, set aside without further boiling. If no milkiness is produced as the mixture cools, the urine may be confidently pronounced free from sugar; for no quantity above a fortieth of a grain per cent. can escape such a search, and any quantity below this, is devoid of clinical significance." "The points of importance in this proceeding, are to boil the test first, and not the urine; and to use an excess of the test."

The volumetrical method, employed by Fehling, with perfect success, consisted in first establishing by experiment, the relation between the amount of the solution of copper, when reduced to a suboxide with the sugar present. He found that 180 parts of grape-sugar decomposed precisely 1246.8 parts of copper solution—or one equivalent of grape-sugar to ten of the solution. His standard solution containing 200 grains, is exactly decomposed by one grain of sugar.

The differential density method is regarded, for convenience and accuracy, as containing more advantages than any other. The principle of this method depends upon a comparison between the specific gravity of glucose urine, and such urine deprived by fermentation with yeast, of its saccharine material. Roberts, in his late superb work, from which the above methods of sugar-testing have been drawn, in reference to this method, says: "The mode of experimenting was: first, to ascertain by the volumetrical analysis," "how much sugar was contained in a certain diabetic urine. The urine was then fermented by means of German yeast—its specific gravity having been previously ascertained. In twenty-four hours after the fermentation had ceased, and the scum had subsided, the density was taken again; and by subtracting this from the density before fermentation, the 'density lost' was ascertained. And it was found that for every grain of sugar contained in an ounce of urine, one degree of specific gravity had been lost. Ex-

periments were multiplied on diabetic urine: corresponding experiments were made with solutions of sugar of known strength, in healthy, non-saccharine urine, and pure water, and the issue of all was to establish the conclusion, that *the number of degrees of 'density lost' indicated as many grains of sugar per fluid ounce:*" truly a beautiful and delicate method of determining the quantity of sugar in diabetic urine.

## SELECTIONS.

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*Remarks on Syphilitic Inoculation.* B. L. BIDENKAP, M. D.,  
of Christiania.

In a series of letters published in *The Lancet*, Mr. Henry Lee has laid before the profession his views of modern syphilidology. As Mr. Lee has done me the honor of mentioning my name in connexion with some of the facts produced, and as I flatter myself to have contributed in part to the development which this branch of medical knowledge is undergoing just now, I feel myself compelled to correct some of the facts on which Mr. Lee has built up his peculiar views, and to make English readers acquainted with some points which apparently have escaped the attention of the above named author.

1. Mr. Lee seems not to have been thoroughly acquainted with the manner in which others have conducted their experiments in testing the auto-inoculability of the indurated syphilitic chancre. He inoculates a few times, and then leaves off, confidently asserting that the chancre in question is non-inoculable. Others, among them myself, and lately Mr. Walter Coulson, repeat the inoculations for weeks. In this manner at last the characteristic pustule will make its appearance, with its consequence—the excavated ulcer. If Mr. Lee had known the facts laid down in literature, he would have known this and a great deal more concerning syphilitic inoculation, which numerous experiments have taught us, and which he would have done well to try for himself. As the case now stands, Mr. Lee has only succeeded in showing the profession that his own experiments have failed because they have not been conducted in the proper manner.

2. The same remarks will apply to the experiments of the Italian surgeon, Dr. Amilcare Ricordi, whose pamphlet Mr. Lee has quoted in favor of his own opinions. By perusing this pamphlet attentively, Mr. Lee would have found that the Italian surgeon has proceeded in the same manner as himself.

3. Mr. Lee has quoted from Dr. Ricordi an account of my experiments in inoculating the matter of indurated sores in Paris, at the Hôpital du Midi, under the observation of M.



Follin. It is said that when I succeeded, it was because I persisted in inoculating from a sore to which M. Follin objected, because he considered it to be "*mixed*." Mr. Lee would have done better not to quote, in a scientific lecture, what the said Dr. Ricordi heard from Dr. Pellizzari, who had heard it from Dr. Bargioni, who again had it from M. Follin and his interne. Such evidence is like an old tradition, and is not a fit basis on which to erect a scientific conclusion. It is of the same hearsay kind which Dr. Lane has complained of in Mr. Lee's account of the proceedings at the Lock Hospital.

Now, it is a very mild expression to say that this account of what passed in M. Follin's service at the Hôpital du Midi is not an exact statement of facts. To avoid more misrepresentations in future, I feel myself bound to state shortly what passed.

Five patients were pointed out to me by M. Follin as laboring under true, uncomplicated, unmixed, indurated chancre. M. Follin caused these five chancres to be dressed with savine powder, in order to produce suppuration, which did not exist previously. He asked me then to inoculate the secretion which this remedy had produced. The matter from two of these chancres produced characteristic pustules. From the third the result was doubtful. The last two furnished no inoculable matter—probably because they were very old; and only a very slight effect was produced by the savine powder. After M. Follin had seen the positive result of the inoculations—but *not before*—he pronounced the first two which furnished the inoculable matter to be "*mixed*," and the experiments consequently of no value. I do not doubt in the least that he believed it, because an irritated chancre often assumes this aspect; I only wonder that he did not tell me before. One more patient was pointed out to me as a fit subject for the experiment, but he left the hospital the day following the inoculation. Another, the seventh, was at least selected as the bearer of a typical indurated chancre, and savine powder applied, but for some days no suppuration could be produced. This is a very common thing, as every experimenter ought to know; and in this instance it was the less surprising, as the patient himself constantly washed away the savine powder, and applied the usual *vin aromatique* to the chancre. As might be supposed, the slight mucopurulent discharge from the surrounding parts of the glans and the prepuce which covered the chancre did not produce any effect when inoculated. It seems that M. Follin lost his

patience with what he probably thought a very tedious and uninteresting proceeding; and he assured me very politely that he had had enough of it, just on the same day that a small ulceration had formed on the chancre. Of course I could not insist on carrying on the experiments under these circumstances. I too had had enough of it, and I did not think it worth my while to try to convince a man whose opinions, it was clear, were fixed beforehand; and I had seen enough of the manner in which experiments were conducted in that place, to remark the difference between it and the laborious way I had followed hitherto. These are the experiments to which Mr. Lee has alluded. The worst that can fairly be said of them is that they were incomplete, and therefore inconclusive.

4. Mr. Lee refers to three patients whom he has seen, after they had undergone syphilization in Christiana, and he appears to doubt whether any of them had really suffered from syphilis at all. The third case he speaks of as doubtful, because in its early stage it did not follow the course which syphilitic infection usually does. On this case it is right that I should speak, because the patient was originally under my care, and I probably am the only person, except the patient himself, who knows the particulars of his case. The patient, with whom I was personally acquainted, came to me in January, 1865. He had then a small elevated red spot on the mucous membrane of the urethra, just inside the orifice. No distinct hardness could be felt; the centre of this spot had a yellow color corresponding in size to the head of a pin. This spot and the yellow centre gradually enlarged, and at last a superficial ulcer was formed. About a week afterwards several small ulcers formed on the glans and perpuce, and took the course described by M. Auzias Turenne, and related by Mr. Lee. I did not hesitate to foretell the probable consequence—viz: constitutional infection, which had not yet manifested itself when I left Paris at the end of February, and handed the patient over to M. Auzias Turenne. I saw the patient again in Norway in the middle of April. He had then a strongly marked roseola, elevated copper-colored spots on the forehead, and white characteristic plaques on the mucous membrane of the throat. I think this should be enough to convince any one; and I also think it a strong point in favor of syphilization that Mr. Lee failed to detect any trace of syphilis in this patient after his treatment.

5. Mr. Lee, in speaking of the immunity obtained by syphilization, tries to explain the fact by comparing it with

an alleged immunity arising from the effects of irritating substances applied to the skin. Now this last immunity or want of reaction is not, as Mr. Lee seems to think, a very common thing, unless the constitution of the patient has been weakened by the repeated applications of such irritants, or by starving, low diet, or other circumstances producing general debility. Under such circumstances there is often a marked want of reaction even against the syphilitic virus, as Mr. Lee will find fully detailed in the writings of Professor Boeck and myself. But, except in debilitated persons, common irritants do not produce such immunity as the chancreous matter, in proof of which I need only point to the large number of cases treated with anatomical plaster, in Christiana, in whom in no single instance did it occur. And general debility is not produced by syphilization, as Mr. Lee would have known if he had watched the progress of the cure.

6. Mr. Lee's ideas of the natural process through which the system is liberated from the effect of morbid agencies are somewhat too rudely shaped to be taken seriously. Professor Virchow, of Berlin, has very ably pointed out that the specific processes which manifest themselves in the syphilitic organism are not the result of simple deposits of morbid matter. They are either inflammatory, forming a hyperplastic process, or more specific, but still of an active kind, more like neoplasmata (granular tumours) than anything else. Likewise the specific artificial ulcers made in syphilization are not simple draining tubes, but affect the system in a specific way. Nobody would think of substituting an antimonial plaster for a vaccine pustule, and there is no more analogy between the action of this remedy and cow-pox, than between it and syphilization. Whether the immunity produced by the syphilization is complete or not is nothing to the point. The fact is that it produces a state of system in which the production of inoculable matter is failing or incomplete. This is enough, both according to theory and experience. The immunity produced by cow-pox, and even by small-pox, is neither absolute nor everlasting, yet no one denies its existence.

7. When Mr. Lee tries to find an explanation of the successful inoculations in an alleged impurity of the lancet, I can only assure him that I always clean my lancet well, and that I, from the beginning of my experiments, have had my attention fixed to this point.

8. The fearful mortality of which Mr. Lee speaks, in consequence of two deaths which have lately occurred in patients

who have undergone syphilization in London, does not exist in reality. Why, when he spoke of these, did he make no mention of the large number of cases treated in the hospital of Christiania? and why did he make no mention of the real cause of death in those two patients? It would appear that he knew no more of the nineteen or twenty cases treated in London than of the 318 cases of which he could have obtained information from my pamphlet, "*Aperçu des différents Méthodes employées à l'Hôpital de Christiania, &c.*," 1863. Of these 318 cases, with the exception of some children laboring under hereditary syphilis, only two persons have died. The one died of dysentery, the other of puerperal fever.

9. The chief objections of Mr. Lee against syphilization seem to be—1st, that the calomel vapor bath is better; and 2nd, that syphilization is difficult to apply in private practice. With regard to the calomel vapor bath, it is difficult to understand why it should be so far superior to all other treatments which have been employed during the last three hundred years, and in which mercury plays a greater or lesser part. Mr. Lee can hardly expect us to accept the two cases which he relates as a fit basis for judgment. The difficulties of employing syphilization in private practice may readily be overcome, as the experience of Christiania and other places has shown. But there is really a serious objection against many other methods of treating disease—for example, the hypodermic method of applying remedies: the doctor must see his patients often. It is certainly much more convenient, especially with hospital patients to see them once, and then send them away perhaps never to meet them again. I have seen syphilis treated in this way at the consultations in French hospitals. A patient presents himself with secondary symptoms. One rapid glance is enough. "Give him No. 14" (a preparation of the protoioduret of mercury). "Are you married?" "Yes, and my wife has the same complaint." "Give him two of No. 14." This is a very convenient manner of treating syphilis at least for the doctor, but in reality it is perhaps worse than nothing.

10. I shall finally point out a very impartial and ably written review of the progress of science with regard to the syphilitic virus. This review, "*Die Lehren vom Syphilitischen Contagium, von Dr. Heinrich Auspitz Wien, 1866*," contains an elaborate account of what has been done by different authors and in different countries to clear up this obscure point. The author has unconditionally adopted the

views which I some years ago presented to the profession, that the soft and the indurated chancre are of common origin. Moreover, he states that the experiments on which I founded my views, especially those proving the auto-inoculability of the hard chancre, have been repeated in the service of Professor Hebra in Vienna by Dr. Pick, his assistant, and with exactly the same result as I had obtained in Christiania.

The dualistic doctrine seems after this to be doomed to the same fate as the once cherished creed, that secondary symptoms are not contagious. Like this it was started in France, and made a rapid and glorious career through Europe, but was never believed in by true observers of nature.—*London Lancet*.

Christiania, May, 1866.

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*On Digitalis and its Uses.* JOS. ADOLPHUS, M. D., of Hastings, Michigan.

While the profession is in serious quest after new remedies, we have been sadly at fault in neglecting old and valuable ones, in consequence of not having sufficiently attended to their therapeutic and physiological operation. Such is the case with the article now under consideration. It is not unusual to find digitalis stated in the books as an arterial sedative, whose operation is particularly on the action of the heart. In part this is true, but the true usefulness of digitalis is not to be found in its arterial sedative qualities. I will call attention to the use of this article in general practice, and then a more correct judgment may be formed of its usefulness.

A woman æt. 38; anemic, with a small, weak, frequent pulse, 115 per minute; hearts action weak, with deficient aortic valves; general œdema; pupils contracted in the morning, and much dilated at evening; nervous system quite irritable; tongue moist, flabby, broad, pale, and tremulous when protruded; respiration short, 23 per minute; occasionally skin colored with a jaundice hue; complains frequently

of headache; feet and hands most genererally cold and clammy, and for a week back complains of insomnia. When I first saw her she had a hacking cough, anorexia, feeble pulse, and sleeplessness; she was attended by a neighboring physician, who called her case tubercu losis. I immediately put her under the tincture digitalis, according to the U. S. P., gtt. x. three times a day; no other remedy. Five days after, the pulse was 85 per minute, and strong; skin moist and warm, and cedema disappearing; color of skin more natural; respiration reduced to 18 per minute; relish for food returning, and sleep better, being more refreshed; heart's action more regular. At the commencement of the second week, all the symptoms quite improved. She then took cod liver oil, and thirty-six days after this treatment was begun, she was well enough to leave off the digitalis which she had taken in four-drop doses after the first eight days. She continued the oil for two months longer, and has from that date (seven months) onward had no return of the bad symptoms, though the valvular disease is still present.

*Commentary.* This case is one of four, all treated in like manner, and shows that digitalis is a tonic to the circulating system.

No unusual flow of urine occurred during the disappearance of the cedema, and with its disappearance also went the jaundiced discoloration of the skin. The restored cardiac force was followed by improved digestion and nutrition; the brain was supplied with superior life-force through the improvement in the blood. That the power of the remedy was in fact directed toward the nutritative and nervous system cannot be denied, inasmuch as the excito-secretory system of nerves were renewed in life-force.

The next class is that of pneumonia. Seven cases of pneumonia, treated with digitalis tinctured.

*Case 1.* Boy eleven years old; full habit and strong physical developments; was attacked with single pneumonia of right lung; condition of patient eighteen hours after first chill was as follows: Pulse 105, sharp, full; skin hot; face flushed; cough frequent and dry; urine scanty and high-colored; headache; eyes suffused and watery; pupils sensitive to light; respiration quick and short, painful; percussion dull up to the sixth rib; respiration higher up, purile; over the inflamed part the sound was mixed with crepitant rale, dry rhoncus, etc., etc. Commenced the treatment with two drops of tincture of digitalis, every hour; enveloped the chest in a mush poultice. Ten hours after, the cough was

not so urgent, and the pulse was lowered five beats. Thirty-six hours later fine crepitation was heard; puerile respiration not so strong; urine more copious. In forty-eight hours more resolution was effected.

*Case 2.* Man, 86 years of age; bilious habit, mixed with nervous; attacked with chills and rigors, followed by high fever; cough; painful respiration, and headache. I saw the case sixty hours after the first chill. Auscultation and percussion revealed confirmed pneumonia. Pulse 100; tongue sharp, red at tips and edge, base dirty white; papillæ prominent, especially toward lower third. Skin hot and pungent; breath offensive; eyes red and suffused; pulse soft and quick, quite easily compressed and lost under the finger; lower half of left lung involved; cough very harassing; sputa thick and tough; urine scanty, ammoniacal and high colored.

Commenced the treatment with ten drops of tincture of digitalis every four hours, until six doses are taken, and then five drops every four hours. Sixty hours after, symptoms began to yield. Sputa began to grow less tenacious. Pulse stronger, and not so full nor so soft. Fifth day of treatment the crepitant fine sound began to be heard. On ninth day patient considered convalescent.

*Case 3.* Woman, 62 years old; of broken down constitution; was attacked with pneumonia in both lungs, but severest in right. After the second stage was well established, (which was on the fifth day) I saw her. Pulse 130, quite small and weak; dullness all over lower half of right lung, and one-fourth of left; no respiratory murmur or sound of any kind; tongue dry, covered with dark-brown fur; respiratory movements quick and short. Case esteemed of a typhoid type.

Commenced treatment with three drops of tincture of digitalis, every three hours. In eighty-four hours the pulse grew stronger and firmer; and in sixty hours more, respiration began to be heard in the upper edge of the left lung, and so on gradually, and by the eighteenth day respiration was restored all through both lungs.

These three cases are types of the whole, but let us read a lesson.

The great power of the remedy was to strengthen the heart's action, for the pulse was more or less strengthened before forty-eight hours of treatment. Nutritive life was developed anew, for the life-forces seemed to be called into renewed action.

In all these cases quinine was used, and mush jackets applied to the whole chest—which, by-the-by, is one of those great adjuncts to the successful treatment of all lung complaints, which we must never neglect.

*Two Cases of Delirium Tremens treated by the Tincture of Digitalis after Opium and Chloroform had failed.*

*Case 1.* Third day utter sleeplessness, with all the horrid symptoms of delirium tremens. Two teaspoonfuls of tincture of digitalis was ordered at once, and repeated in two hours. Sleep was procured in four and a half hours, but not till the pulse was made firmer.

*Case 2.* Was an old sot, who had suffered from repeated attacks of delirium tremens, which lasted longer at each recurrence. I was called to see him on the second day of the attack, and his brother told me that I had better kill him at once, as he was a miserable nuisance. I gave him f. 3 vj., tincture of digitalis, as he was raving, violent, and almost unmanageable. In an hour he began to grow more manageable, and in three hours went into a profound sleep, which lasted three and a half hours, when he awoke nearly collected and much refreshed; f. 3 ij. were then administered in  $\frac{3}{4}$  vi. of beef tea, and the case was effectually cured in two days.

I was consulted concerning a delicate young lady, quite pale and anemic, æt. 23. The catamenia had never appeared. Hands and feet cold much of the time; shortness of breath; heart's murmur loud, hollow sound; palpitation; no desire to locomotion; occasional flushes of fever followed by headache; complains much of cardialgia and acid stomach; abdomen tympanitic; appetite morbid; bowels very irregular, sometimes quite costive, at others loose; has suffered from several attacks of hæmoptysis; sometimes the sclerotic coat of eye would be quite yellow, at others quite blue; tongue broad, partly white and pale, papilla very prominent; lungs sound; sleep quite imperfect, dreams very much; digestion quite in error. Has been treated by several physicians with iron, cod liver oil, and emmenagogues, all to no effect. Saw her six months ago; ordered ten drops of tincture digitalis three times a day. On the fifth day poisonous symptoms came on. Suspended the tincture for three days, and commenced with six drops three times a day. In ten days more toxic symptoms supervened again. Stopped for three days, when four drops of tincture was given three times a day, and continued thirteen days longer, when pain in pelvic



cavity was felt, quite slightly at first, but increased in intensity for four days, when the flow came on quite lightly. The remedy was then given in two-drop doses three times a day, and by the forty-sixth day the flow was complete. Appetite gradually improved. The first notable symptom of improvement after the second toxic effect, was a feeling of agreeable warmth in the feet and hands, which was followed closely by more sound and refreshing sleep. The paleness of the mucous membrane of the lips, jaws and tongue began to pass away with the coldness of surface. She observed to me that her food gradually set lighter on her stomach, and that her heart symptoms were the first to feel improved.

This case greatly improved in sixty days, and cod liver oil was followed up for one hundred days in succession, and now she is in perfect health. Nothing but the tincture of digitalis was used for the first forty days. If we study this case closely, we shall find that the medicine in producing its toxic effect was followed by no permanent ill consequence; that its tonic power on the muscular fibre, under certain circumstances, is not to be disputed. What these circumstances are, constitutes the pith of the matter. I am of the opinion that the *modus operandi* is on the molecular life of the organ, throwing it into tonic movements. But I must not fail to show that the action is primarily on the heart, if not through the nutritive system. Digitalis has a power over the life forces that calls forth a greater power in the organs to select nutritive material from the blood. I must not be understood to say that I claim for it any power of enriching the blood. But we must not suppose that the blood is ever quite destitute of nutritive material. But when the vital forces are low, in consequence of imperfect nutrition, a general anemia of fibre occurs in consequence of imperfect supply of nutrition from impoverished blood.

But at the same time, if there exists a dormant life force in fibre or molecules, susceptible to stimulating action through the tonic power of digitalis, a renewal of life occurs, whose result is to call or select from the blood, poor as it may be at first, new material, which is followed by elimination of effete matter, and hence an awakening of life force through the whole nutritive system which calls for material to supply the waste, thereby making a demand for food. This is set forth in strong light by the fact that digitalis causes a large increase of solid excreta in the urine, without greatly increasing the quantity of water. This I repeatedly observed in pneumonia, for the demand for food

was greater in cases treated with tincture of digitalis than when treated otherwise. It would be difficult to show that digitalis is a stimulant, that is in the usual acceptation of that term, nor can we call it a tonic in the sense that we do colombo and other tonics. However, we cannot fail to see that its effects are such as we should expect from a remedy that could appeal at once to the elementary molecules of tissue, and call or awaken them into renewed activity.

But its influence on the nervous system is manifestly different from that of narcotics proper, or of nervous sedatives. How it acts upon the excited brain and nervous system when suffering from alcoholism, can only be explained in the light of an antagonism to that poison on those tissues.—*Med. & Surg. Reporter.*

### *Nitrate of Potash in the Cure of Intermittent Fever.*

In the *St. Louis Medical and Surgical Journal*, Amos Sawyer, M. D., of Hillsboro', Illinois, publishes the following formula:

R. Potassæ nitrat., gr. x.  
Spr. vini gallici, vel aquæ, f. ʒ ss. M.

Take immediately.

He says:—The above prescription I have used with great success in the cure of intermittent fever, even where quinine has failed. In my opinion, no preparation is equal to it; for it possesses anti-periodic properties completely, and may be administered when the stomach would not tolerate quinine. I deem it a specific in ague; for I have never failed to arrest the paroxysm, if uncomplicated. You will also find that the patients are less liable to relapse than in those cases cured by quinine. In the cold stage, if administered in a full dose, and the patient be placed in bed and covered with blankets, he will, in a few minutes, experience considerable heat, which will be followed by copious perspiration, and every unpleasant feeling will vanish. It is seldom the patient will experience a second attack. Where it is more

agreeable to the patient, the powder may be placed on the tongue and permitted slowly to dissolve.

I shall not attempt to explain the action of this medicine on the system in the cure of ague, but will leave that to older heads than mine to determine; still, we do know that after it is taken into the stomach and becomes absorbed, it has the chemical effect of changing the dark-colored venous blood to arterial—or at least it changes its color. It also acts on the kidneys as a stimulant, producing diuresis as well as diaphoresis, and in this manner may rid the system of the poison that causes the ague; provided that poison is produced "by the retention of materials destined for excretion." This medicine more closely resembles nature's mode of curing this same disease than any other, as she cures by copious diaphoresis as well as diuresis, or, in other words, by elimination.

## EDITORIAL AND MISCELLANEOUS.

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### OUR JOURNAL.

The present issue makes the tenth number, "New Series," of our Journal. For ten months, under very embarrassing circumstances, the editors and proprietors have labored to reestablish it upon firm basis, by making such a periodical as the profession of medicine require—a medium of communication for the thoughts and discoveries of physicians, for the discussion of scientific questions amongst medical men, and for giving the medical news of the day. This we have done to the best of our ability, without demanding of patrons pre-payment for subscriptions and advertisements. Now, however, as the volume has advanced nearly to its close, and as the general pecuniary embarrassment that precluded payment at the commencement of the year, has, to some extent, been relieved, we hope and believe that the subscription price of the Journal will be forwarded at once, by mail, at our risk, by those who have received it.

Monthly cash payments, at high rates, to the publisher of the Journal, has well nigh exhausted all the means that can be applied in that way, but by prompt remittance, those indebted to us can, without detriment to themselves, from the small amount each owes, afford the means to relieve us from the pressing demand. Pay up, if you please.

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### BIBLIOGRAPHICAL.

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*A Vest-Pocket Medical Lexicon.*—This neat and very convenient little work has been sent us by the publishers, William Wood & Co., New York. It is said to contain "ten or twelve thousand words," and is of such diminutive size

and clear type, that in it a great convenience is afforded the student of medicine. Sent by mail, to those wishing, at *seventy-five cents*. One dollar for a copy in Tuck gilt edge binding.

*Asiatic Cholera.*—*A treatise on its origin, pathology, treatment, and cure. By E. Whiting, M. D., and A. B. Whiting, M. D.—M. W. Dodd, Publisher, New York.*

This is a small volume of 212 pages, neatly printed and bound. Time has not allowed us sufficient perusal of its contents to form an opinion of the full merits of the work. We will take occasion hereafter to allude to it.

*Surgical Clinic of La Charité.*—*Lessons upon the Diagnosis and treatment of Surgical Diseases, delivered in the month of August 1865—By Professor Velpeau.*

The above is the title of a small volume of 103 pages, translated by W. C. B. Bifield, M. D., and published by James Campbell, 18 Tremont St., Boston. The List of Contents embraces Generalities, Fractures, Affections of the Joints, Inflammations and Abscesses, Affections of the Lymphatic System, Burns and Contusions, Affections of the Genito-Urinary Organs, Affections of the Anal Region, Affections of the Eye, and Statistics of Operations. We expect benefit in the perusal of anything emanating from this distinguished surgeon.

*Cerebro-Spinal Meningitis.*—*By S. S. Sewell, M. D., Prof. Of Anatomy in Chicago Medical College.*

We have not had time to bestow upon this work a careful examination. We have looked through it, however, and candor compels us to say, he has dealt ably with the subject. Whilst we can not afford to discard the guess-work of theory, it is very refreshing to deal with facts, and of these the author has given us something substantial.

We anticipate great pleasure and profit from a careful perusal of this little work, and in the mean time commend it to the public as a most meritorious production.

*Anstie on Epidemics.*—This work of ninety-five pages, from the press of Lippincott & Co., Philadelphia, has been sent us by the publishers. We have not had time to peruse it. We shall do so, however, and give our opinion of it.

It is claimed for Dr. Anstie, that he is distinguished for his scientific attainments, and he has doubtless presented a popular treatise of much merit; but we differ with the publishers as to the idea of popularizing medicine, or anything else. Popular literature is not likely to improve either the taste or morals of a people. Popular constitutions and laws soon react upon the public mind, and the innate respect of the people for the law-making, and law-administering power degenerates into contempt for both. Might, this not be true in medicine also. We believe that much might be accomplished in this direction, by shortening, and anglicizing many of the long hard terms in which the science of medicine is enwrap, and to this extent we are with the publishers.

*Practical Therapeutics, considered chiefly with reference to Articles of the Materia Medica.* By Edward John Waring, F. R. C. S., F. S. S., Surgeon in Her Majesty's Indian Army. From the Second London Edition. Lindsay and Blackiston, Philadelphia, 1866.

The above work in one volume of 774 pages, with a full index of medicinal agents, and also of the diseases alluded to in connection with them, has been sent us by the publishers. Of its particular merits, we hope hereafter to be able to allude.

*The Science and Practice of Medicine.* By William Aitken, M. D., Edin., Professor of Pathology in the Army Medical School, etc. In Two Volumes. Lindsay & Blackiston, Philadelphia, 1866.

We have received, from the publishers, the first volume of the above work, with a promise of the second, so soon as published.

## REMARKS.

The reports from which the lists of deaths at Pensacola, in former numbers of this Journal, have been taken, are duplicates of those made by Surg. A. J. Foard, Medical Director, (now residing at Columbus, Ga.,) which he has kindly permitted me to use. To avoid misapprehension among those of your readers who were not in the Confederate Army, it is proper to remark that Gen. Foard was on the staff of Gen. Braxton Bragg, during nearly all of his career. The little army at Pensacola was a complete organization in all its departments. The Medical Department, as well in the field as in the hospitals, was organized by Dr. Foard, and was, at the early period to which these reports relate, as complete, and as well disciplined, as any department of the Confederate Army at any subsequent period. During his stay at Pensacola, Dr. Foard twice (in one instance, as early as May or June 1861,) successfully performed the operation of amputation at the shoulder joint; complete recovery following in both instances.

Prior to the battle of Shiloh, Gen. Bragg's army left Pensacola, and made a junction at Corinth, with Gen. A. S. Johnson. There, by virtue of his rank, Dr. Foard succeeded Surgeon D. W. Yandell as Medical Director of Department No. 2, which extended from the Department of E. Tennessee, commanded by Gen. E. Kirby Smith, to the Mississippi River. When the army moved to Chattanooga, prior to the Kentucky campaign, which resulted in the battle of Perryville, he conceived the idea of placing the hospitals in the rear, in charge of a superintendent, who should report to headquarters through him, and be guided by his direction. For this important and responsible position the writer was chosen. In June 1868, his position was modified by orders from the War Department, by being denominated a Director of Hospitals, with directions to report direct to the Surgeon General. This modification did not practically change the relationship to a very great extent. For the

necessities of the service demanded, at all times, a cordial co-operation of the Medical Director in the field, and of the Medical Director of Hospitals. At no time was Surgeon Foard subordinate to me, and while his subordinate, it was a pleasure to myself and others of the medical staff, to honor him as our chief.

Having had chief control of the Medical Department of the western army, after the battles of Shiloh, Perryville, Murfreesboro—during Joseph E. Johnston's celebrated campaign in Georgia; during Hood's commandership of the army, both in Georgia and in Tennessee, and only laid aside his office at the termination of the war—Dr. Foard has had opportunities of acquiring practical experience in regard to military surgery, discipline, hygiene, and everything that relates to the medical department of armies, which has fallen to the lot of few men in any age or country. That he performed his duties well, the almost universal acclaim of his subordinates testifies. No man in the medical staff of the army made more sacrifices, and none brought to his aid more minute knowledge of his duties. For he occupied before the war an honorable position in the army of the United States, and promptly left it in obedience to the honorable impulses of a native Georgian, when his State seceded.

After the battle of Murfreesboro, Dr. Foard left the staff of Gen. Bragg, and was succeeded by Surgeon E. A. Flewellen, now of Thomaston, Georgia, to take the position of Medical Director on the staff of Gen. Joseph E. Johnston, whose command then extended from the mountains to the Mississippi River, and included several Departments. This position was afterwards changed to that of Medical Inspector of the Departments referred to. After the battle of Missionary Ridge had been fought, Dr. Flewellen having been relieved at his own request, on account of ill health, Dr. Foard was again assigned as Medical Director of the Army of Tennessee.

To the earnest interest and the cordial support which



Medical Directors Foard and Flewellen ever manifested, the Medical Director of the Hospitals of the Army of Tennessee attributes much of his success in performing his difficult and arduous task; and if any honor or gratitude of the profession or of the soldiery is due the latter, he would not have the former forgotten or overlooked.

I can not but hope that the time will yet arrive, when circumstances surrounding us will admit of our jointly furnishing the public with such a history of those who served under us, as their directors, so cheerfully, so earnestly, so skillfully, and whose labors, under difficulties, were crowned with a success of which the medical staff of armies far better supplied, might, with much propriety, congratulate themselves.

S. H. STOUT.

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WE regret the failure to receive from our colleague and contributor to the Journal, Dr. Stout, the usual monthly amount of Army Statistics, for the present number. The above statement, explanatory of the rank of, and connection between the several Medical Directors belonging to the Army of Tennessee, was received some weeks since, with a promise of the ordinary amount of Hospital Reports, for December. It has not, however, reached us before going to press, notwithstanding the present issue is delayed several days beyond the usual time of publication.

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### A MONSTER.

The following short account of a singular case of labor, and the birth of an extraordinary monster, was sent us by Dr. J. K. Hamilton, of Stone Mountain, Ga.

We very much regret not being able to obtain the much desired examination of the body, in order to ascertain the

direction of the cord from the point of attachment, and the exact nature of the other peculiarities connected with the formation of this child.

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*Editors Medical Journal :*

I was called, on the third of April last, to see Mrs. N., who was in labor with her first child, eight months *eniente*.

I made a vaginal examination, and discovered a case of placenta prævia. The pains were regular and persistent, with slight protrusion of placenta during paroxysms. Considerable hemorrhage ensued, which was partially controlled by the tampon, cold applications and rest. The labor lasted about two hours: the afterbirth emerged first, and was followed almost immediately by the expulsion of the child.

The most remarkable feature of the case was: The umbilical cord was attached to the crown of the head, leading directly from the placenta, seeming to permeate the brain, or more probably the inner surface of the scalp. The neck was unusually large, caused probably by an undue supply of vascularity and nervous influence, with a consequent development of tissues surrounding them.

There was a cleft in the upper lip, constituting simple hare-lip. The abdomen contained a fissure extending from the epigastrium to near the symphysis pubis; hence the child was nearly disemboweled, with apparent obliteration of the umbilicus. The liver and intestines were well developed, and although it exhibited evidences of recent vitality, it came still-born, owing, doubtless, to the anomalous attachment of the placenta and cord. The father of the child, during the late war, lost his left forearm, in Virginia, it being amputated about six inches below the elbow: the child, also, on same side, had its forearm off—the stump bearing a great similarity to the arm of the father.

The assimilation process in this instance, as respects growth and development, was normal, the trunk and limbs being properly proportioned.

I do not propose, in this short report, to attempt to explain the causes which may give rise to these preternatural perversions of the laws of the animal economy. In one respect it may have ensued from some accidental change of position experienced by the foetus at some period of its uterine existence; and, in another, it may have originated from the influence of the maternal imagination on the foetus in utero, or attributable to a primitive defect in the germ. Whilst we know and appreciate the opinions of learned physiologists, in regard to the causes of monstrosity, further, deponent saith not.

J. K. HAMILTON, M. D.

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## ORIGINAL COMMUNICATIONS.

### ARTICLE I.

*Pathology and Treatment of Milk-Sickness.* By A. D. Coxey, M. D., of Calhoun, Ky.

A few days since I met with the Atlanta Medical and Surgical Journal, in which I found an able article, written by Dr. John M. Johnson, of that city, on the Pathology and Treatment of Milk-sickness. I read the article with much pleasure, not only on account of the interesting matter it contained, but also, on account of its author, who is an old friend of mine, whom I first met in 1840. In that year I located near the town of Ramsey, on Green River, where he then resided, for the purpose of practicing my profession. I have continued to practice in this locality ever since, and, as it is near the centre of the milk-sick region, of which he speaks in his article, lying between Green River and Panther Creek, I have had an ample field in which to make observations, and flatter myself that I have learned some very important facts in regard to the disease and its treatment. The result of my observations I present to the readers of the Atlanta Medical and Surgical Journal, not only for the benefit of my medical brethren whose experience has been confined to regions in which the disease never prevailed, but also for the purpose of confirming the correctness of

the pathological views expressed by my friend Dr. J., who manifests on this, as on all subjects connected with the profession, a becoming zeal.

I do not propose to speak of the origin or cause of milk-sickness. Of this I know nothing more than was known twenty-five or thirty years ago, and consequently could not throw new light upon that subject. I am inclined to think, however, that it grows out of some cause peculiar to the native forest; as cattle, that are confined in their grazing, to cleared and cultivated soil, are never known to have the *trembles*. The Doctor's mushroom theory is embraced by many; and stands the test of criticism as well, if not better, than any of the various theories advocated by the physicians and people in this region of country.

It is evident that milk-sickness is produced by a non-volatile poison, which enters the system through the stomach, and from thence is conveyed to, and expands itself upon the nervous centres. Of the nature of this poison, nothing is known, except what has been learned from the symptoms of the disease which it produces.

The first and most prominent symptom manifesting the existence of the poison in the system, is extreme debility, amounting, in the muscular tissues, almost to paralysis. Hence it is, the muscular system of a person, affected with the poison, becomes fatigued and exhausted on the slightest exertion. A walk of fifty yards will so completely exhaust the sufferer that he will be compelled to sit, or lie down, to rest for a few moments, before he can proceed, feeling as well otherwise as usual. This condition of the system is designated the *trem*, which may be considered the first stage of the disease. In some instances it lasts but a few hours, while in others it endures, for eight, or ten days; when it either passes off without any further evil consequences, or merges itself into a fully developed case of milk-sickness. The length of time this symptom may continue will depend upon the balance maintained between the accumulation of the poison and the tolerance of the system for it.

When accumulation exceeds the tolerance of the nervous system for the poison, the mutiny sets in, and the conflict begins. This brings on the second stage, every symptom of which indicates, beyond all question, a diminution of the vital forces far below the normal standard.

Nausea and vomiting are the first and most annoying symptoms of the second stage, which continues until the patient dies, or the disease is broken up.

As Dr. J. informs us in his article, the vomiting is not the result of vascularity from phlegmasia of the sanguiferous system, but from a deranged condition of the nervous centres.

But whether the vomiting is the result of a paralyzed condition of the stomach, which only acts when it is full and can contain no more, as Dr. J. asserts, or whether the nerves of the stomach are rendered irritable from debility, resulting from the pernicious effects of the poison, is a question of but little importance, when considered with reference to the treatment, as the remedies that would relieve the one condition of the stomach, would remove the other. Certain it is, however, that the secretions of the stomach are very copious and irritating in this disease, either from increased and morbid action of the stomach, or for the reason that they are all retained, by not being permitted to pass into the intestines through the pyloric orifice of the stomach. Besides all the bile which may be secreted, instead of passing away through the bowels, is regurgitated into the stomach, and adds much to its irritating contents.

Obstinate constipation is another symptom of the second stage. It always occurs after the vomiting sets in, and never before. These two symptoms seem to synchronize.

The reasons for this are obvious. The vomiting prevents the gastric juice, the other contents of the stomach, and all the bile secreted, from passing into the alimentary canal, upon the stimulating effects of which the bowels depend for their healthy action.

Again, it is in the intestines that the poison of milk-sick-

ness is separated from the organized matter through which it is introduced, into the system, and it no doubt produces its poisonous and pernicious effects, to a greater or less extent, on the nervous and muscular coats of the intestines, before it gets into the blood, and reaches the nervous centres, through which it acts on the system in general, and thus establishes a local, as well as a general effect on the bowels. It will also be remembered that in all diseases in which vomiting occurs as the result of disturbance upon the brain, that obstinate constipation always exists.

There are many other symptoms of the first and second stages, such as weariness and lassitude, fullness of head, thirst, pulse a little full, but not accelerated, diminished warmth of the body and extremities, unpleasant and peculiar odor of breath, a feeling of despair, dry skin, tongue coated with a dark slime, or unusually clean; the latter symptom denoting a stubborn case, as it is always accompanied with a quick pulse, violent vomiting and throbbing of the aorta, which indicate more inflammation about the stomach, or duodenum, than is usual in the disease. But the vomiting and constipation are the symptoms to which we have to direct our remedies, and upon the relief of which the other symptoms all disappear, except in cases where fatal lesions have occurred.

I adopted, in 1849, the pathological views of this disease, so clearly expressed by Dr. Johnson, and which have been merely recapitulated by myself, and resolved to try a treatment predicated upon them.

It readily occurred to me that the first indication was to counteract the debilitating effects of the poison on the nervous system: secondly, to remove the poison from the system, through the emunctories.

Sulphate of quinine was the remedy which I selected as most likely to fill my first indication, and it was not long before I had an opportunity to try its effect. I was called to see Mrs. Uapman, (wife of John Y.,) who lived in Davies county, in consultation with Dr. De Moss. Upon my arri-

val, I learned that she had been laboring under the disease of milk-sickness for nine days, during which time the Doctor had been treating her case without affording the slightest relief. She had all the symptoms of the disease, unmitigated in their force. The vomiting was obstinate. Not the slightest peristaltic movement had taken place in the bowels. The pulse was weak and slow; body and extremities cool; and every symptom indicated increasing debility.

Without addressing the Doctor any reason for the proposition, I proposed to give sulphate of quinine, to which he readily consented, by saying that he would not oppose any remedy I might offer, as he had exhausted his skill, and sent for me because he felt unable to do anything more in the case, but asked me how I expected to get the stomach to retain the quinine long enough for it to have its specific effect on the system. I told him that I thought we could suspend the vomiting for three or four hours by putting the third of a grain of morphine on the surface of a blister which he had drawn over the epigastrium, as it always had that effect. The stomach soon became quiet, and we gave her three 10 grain doses of quinine, two hours apart. Her extremities and general surface became warm, and to my great joy she never vomited another time during her sickness.

We gave a purgative preparation, composed of spirits of turpentine, castor oil, and croton oil, which moved the bowels in the usual length of time for such a purgative. A repetition of a mild purgative from time to time, as circumstances seemed to demand, completed the cure. A sore mouth, produced by the mercury which the Doctor had given her before I was called in, constituted the most annoying symptom with which we had to contend during her convalescence.

Now, it is evident that the vomiting, in Mrs. Chapman's case, was not produced by inflammation, because we know that quinine will not cure inflammation of the stomach in so short a time, or in fact not at all. The truth is that in that case the morphine given rendered the nerves of the



stomach insensible to; and the quinine, when it produced its specific effect, raised them superior to the irritating contents of the stomach, and thus gave relief by restoring to the entire nervous system its usual tone; or, in other words, by overcoming the debilitating effects of the poison.

I hope that I may be indulged while I give a brief history of the next case, in which I administered quinine, as it illustrates, very strikingly, not only the completeness of the relief which it gave, but also the calming and soothing influence it exerted over the nervous system. I was called on to visit Mrs. Mitchell, at the onset of her disease, and as I did not wish to experiment unnecessarily in her case, I treated her on my old plan, for five days, but without affording any relief. I resolved to resort to the use of quinine again, and adopted the same plan pursued by me in Mrs. Chapman's case, which resulted in giving similar relief. The relief was so sudden and unexpected to her female friends and relatives who were in attendance, that it excited their apprehensions to such a degree, that they supposed the patient, using their own language, "to be struck with death." Her husband, partaking of the same apprehensions, came to me with a proposition to call in consultation. To this I objected, giving as my reason, that his wife was better; that the effects which he witnessed were the result of the remedies which I had administered; and that I entertained not a doubt of her recovery. These statements quieted him for a short time; but the ladies and his wife's calmness soon aroused his fears again, and he renewed his proposition for consultation. I asked him to name the physician for whom he proposed to send. He said Dr. L., of Sacramento. To this I replied, that I had no objection, but as he was alarmed about his wife's case, I hoped that he would allow me to send to Owensboro' for Dr. S.

The messengers were dispatched, and the consulting physicians arrived in about seven hours. They examined the case together, and decided that her calm and quiet condition was the result of opiates. I assured them that I had not

given her any opium internally, but had sprinkled the third of a grain of morphine on the surface of a blister which had been drawn over the stomach, the effects of which I supposed had passed away, as twelve or thirteen hours had elapsed since its application. The purgative which I had given her before the consulting physicians were sent for, operated, and her convalescence was rapid.

I did not inform my consulting brethren that I had given my patient thirty grains of quinine; first, because I regarded my patient's recovery as certain, and was satisfied she would lose nothing by my silence; secondly, because the efficacy of quinine as a remedy in milk-sickness was a discovery of my own, and I did not wish it to pass into the hands of others before I had ample time to establish both its efficacy and its safety; thirdly, because I knew that if she were to die from any cause, however remote from the disease for which I was treating her, less obvious in its nature and effects than a bolt of thunder, that her death would be attributed to the remedy, and that I would fall a victim, all bleeding and torn, at the feet of a set of merciless persecutors.

This language may sound strange to the physicians of this day, and of other sections of the country; but it is certainly just in its application to a large number of the profession who figured conspicuously during the prevalence of milk-sickness in this locality. The highest ambition of the profession was to aspire to the attitude of a Magnus Appollo, or the leadership of the treatment of this disease. This was very natural, and, I must add, justifiable, as such a position opened up an extensive and lucrative field of practice in this disease alone; and then, it was reasonable for the public to conclude, that if a physician possessed skill and sense enough to cure milk-sickness, he would do to depend upon to treat successfully any other disease to which human nature was heir. Hence the spirit of rivalry raged high, and often led members of the profession to do and say things which savored more of selfishness than of justice and equity.

But thank the Lord! the conflict is over. The calm days of peace have dawned upon our suffering profession once more. The treatment of the disease is understood, and its occurrence becomes less and less frequent with each successive year, and as the arts of civilization make their inroads upon the native forest. It can now be declared, as a truth, that milk-sickness produces but little more excitement in the profession than does intermittent fever or the Lincoln itch.

I hope that I will be pardoned for this digression. There are a few other points of some importance which I desire to notice. Whisky will relieve the vomiting in many cases, by its stimulating effects on the nervous system. It is most reliable in those cases in which the poison remains in the system but a short time before the tolerance of the nerves gives way, and the disease is fully developed. I was sent for by Mr. Robert Hunt, in haste, and upon my arrival found three of his family vomiting from milk-sickness. They were all taken about the same time on that day. I gave them prepared chalk and whisky toddy freely. The vomiting ceased in about three hours. A purgative was given, which acted on the bowels, and relief followed in twenty-four hours.

Now, that these three cases were cases of milk-sickness, and that the poison had been in the system but a short time, is evident from the following facts. Just thirty-six hours before Mr. Hunt's family were taken sick, he drove up a herd of cattle which had been running at large in the woods during the summer. Among the number were a cow and calf which were separated; the calf turned into a dry lot, and the cow in a fresh stalk field. The milk of the cow was used by the family. A few days after the recovery of my three patients, the calf was seized with the trembles and died.

I have already observed, that the first stage of this disease lasts in some instances for eight or ten days before the second stage sets in. Tonics and stimulants will always cure the first stage, and thus cut short the disease. They should precede a purgative, or be given in connection with it, as

purgatives given alone in the first will often bring on the second stage in all of its violence.

Cook's Pills, or any other purgative, taken at bed time, will, when they act the following morning, frequently stop the vomiting, and check the peristaltic action of the bowels. This is done by the debilitating effects of the purgative, which enables the poison to triumph over the tolerance of the system for it.

That tonics and stimulants constitute the proper remedies for the treatment of milk-sickness is further evident from the superior efficacy of the Miller over the Trafton treatment, as given by Dr. Johnson. The Trafton treatment consisted of the free use of effervescing drinks, etc., which possessed no stimulating power. The Miller prescription being composed of

Venice Turpentine 3ss.

Compound Spirits Lavender ʒi.

Castor Oil ʒii.

contains two stimulating articles which enable the stomach to retain the remedies until they have time to pass into the alimentary canal, when they stimulate and move its peristaltic action, and thus disgorge the stomach of its irritating contents.

The compound spirits of lavender, which, it is said, was thrown in as a stimulating aromatic only, gives efficacy and value to the prescription.

Dr. Johnson informs us that he commenced the treatment of milk-sickness with a stimulant emetic of emetorum and pennyroyal or mint tea. Such an emetic doubtless does good, but let me suggest that a non-stimulant emetic should never be given in this disease. They invariably do harm, by increasing the prostration of the system. This reminds me of a few items of my early history, in connection with milk-sickness and its treatment, which I desire to give, first, to illustrate my former ignorance of the disease, and secondly, to show the difference between the effects of a stimulant and non-stimulant emetic in its treatment. In 1841, I

was sent for to see my first patient with milk-sickness, which was in the person of Mrs. Buck Gibson, who was laboring under a fourth attack of that disease. Dr. Eldred Glover had treated her in her former troubles, but was then dead. Mrs. G. had but little confidence in any other physician, and of course expected to die. She sent for me, I suppose, because I lived near by, and because my father, who lived in an adjoining county enjoyed a considerable reputation in the treatment of milk-sickness. I prescribed two grains of ipecac to be given in about four table-spoonful of tea of capsicum. This was repeated every two hours for twelve hours, when a full dose of ipecac was given, with the free use of the tea. After the action of the ipecac her stomach became quiet, during which time it retained a sufficient quantity of purgative medicine to fully open the bowels. Aunt Mima (an abbreviation of Mrs. G.'s Christian name) recovered in a few days, and I have enjoyed her confidence ever since. But my folly consisted in attributing the beneficial effects of the capsicum to the ipecac. Hence it was, when I was called to see my next case, having no capsicum with me, I gave the ipecac alone, which evidently injured my patient materially, whereupon I abandoned the treatment.

But I must notice one effect which quinine invariably produces when given in milk-sickness, in doses sufficiently large to stop the vomiting. The patient always faints and falls over when occupying the erect position. Hence it is not safe to allow him to get out of bed to stool. He should use the bed-pan. The only patient I have lost since 1840, from this disease, died from this cause. I visited Mr. W. M., and prescribed five-grain doses of quinine, in combination with two grains of camphor, to be repeated every three hours until five doses were taken. On my return I found his stomach quiet, and the general surface and extremities warm. Prescribed castor oil and turpentine as a purgative, with directions not to get out of bed when it acted on the bowels, as he would surely faint, which might endanger his

life. But he disregarded my orders, and against the remonstrances of his wife, got out of bed, fainted and fell prostrate on the floor. Heavy congestion ensued, from stagnation, and he died in a few hours.

The reason of this fainting is obvious. Quinine, when given in full doses, diminishes the propelling force of the heart, and thus adds to the debility produced by the poison, which renders the heart unable to supply the brain with blood against gravitation, when the patient occupies an erect position. It is true that quinine warms up the extremities and the general surface; yet it does not accomplish this by increasing the power of the heart's action, but simply by its retaining effects: by overcoming the spasmodic stricture of the capillaries, and thus removing all obstructions to the free circulation of the blood on the general surface.

After the use of quinine, the patient should be confined to a horizontal position, and during the administration and action of purgatives, whisky toddy should be freely given, when no apprehension of fainting need be entertained. Mild chloride of mercury will, in many cases, facilitate convalescence by its action on the liver, but should never be given while the vomiting and constipation continue, as it is liable to produce ptysalism, which always does harm, by increasing the debility and the irritating contents of the stomach. Stimulants and tonics supersede the necessity for mercury in a large majority of cases.

## ARTICLE II.

*Cases of Cerebro-Spinal Meningitis.* W. C. MOORE, M.D.,  
Atlanta, Ga.

Case 1.—A young man aged 20, (attached to cavalry service,) was admitted in Fair Ground Hospital, No. 2, at this place, the latter part of May, 1864; was taken sick 2d day

before, at New Hope church, about 11 A. M.; was examined by his surgeon, and sent in ambulance to Cartersville, and from thence to this place: before arriving at Cartersville, became delirious, in which condition he was received in the hospital, with the additional symptoms—face flushed, pupil of left eye dilated, right contracted, complete oposthotonos, hyperaesthesia extremae, (two nurses were detailed to keep him in his bed,) pulse 100 and almost imperceptible, temperature of surface normal, bowels constipated, diathesis nervous. He was put on the following treatment: Blister, extending from one ear to the other in width at upper end; in length, from the hair to the last cervical vertebra. Prior to being applied, the surface was irritated with sinapism, and oil terebinth. Vesication occurred in about 2½ hours. In addition to this, sinapism was applied from lower edge of blister to the sacrum, extending two inches on either side of the spine, to remain on as long as possible without blistering. Oil terebinth. was then applied. The following was given internally:  $\mathcal{R}$  hyd. chlor. mit. gr. xv.; sul. quina, pulv. doveri  $\bar{a}$   $\bar{a}$  gr. xii.; M. & ft. chart. No. iii. s. One every hour, with  $\mathfrak{z}$ ss. camph. tinc. opii at bed time.

Saw him at 8 A. M., next day: was still restless, and much in the same condition as yesterday. No action from bowels. Voided urine involuntarily. Blister dressed with following: Equal parts of ungt. hydrar. and cerate simplex; to remain one hour, and cerate resin applied. Reapplied sinapism to the spine, to be followed by application of oil terebinth. every two hours. Ordered sul. mag.  $\mathfrak{z}$ i., to be followed one hour after by enemata. In ten minutes after its administration copious dark watery operations took place, and were repeated every 30 minutes until 3 P. M. I saw they were exhausting him rapidly, and ordered pulv. opii. pulv. camphor, splumbi act.  $\bar{a}$   $\bar{a}$  gr. ss. to be given every  $\frac{1}{2}$  hour. After taking two, the discharges became less frequent. The powders were stopped, with instructions to be again administered in case symptoms required. Ordered cherry wine with equal quantity of sweet milk every two hours.

Towards night patient became more quiet. Ordered ℥ss. camphor. tinc. opii. at bed-time. Milk and wine to be kept up through the night.

Called 8 A. M. next day. Found him much better. Rested about 4 hours between midnight and day. Pulse 90, and more full. Muscles of neck and back considerably relaxed. Bowels moved twice during night. R Pulv. dov., sul. quin.  $\bar{a}$   $\bar{a}$  gr. xii., pulv. capsici gr. vi., m. et. ft. chart No. iii.—S. One every hour. Continue wine and milk freely. Continue resin cerate to blister and ol. terebinth. to spine. Towards evening he began to talk rationally. Asked for something to eat. Gave him arrow root boiled in milk, which has been his diet since admission. Ordered ℥ss. camphor. tinc. opii. at bed-time, to be repeated in case he did not rest.

Called at 8 A. M. next day. Found him considerably improved. Pulse same as yesterday, both as to volume and frequency. No action from bowels. Was quiet all night, but did not sleep much until nearly day. Conversation rational. Strict orders to talk as little as possible to him, and keep ward perfectly quiet. Continue resin cerate to blister and ol. terebinth. to spine. Ordered R hydrar. chlor. mit. quin. sul.  $\bar{a}$   $\bar{a}$  gr. xiii., pulv. capsici gr. vi., m. et. ft. chart No. iii.—S. One every hour. At 1 P. M. gave him ℥ss. sul. mag. which operated without enema. Camphor. tinc. opii ℥ss. at bed-time. Continue diet, with wine and milk.

Called at 8 A. M. next day. Found patient considerably better. Pulse 80, and full. Said he was hungry. Allowed him two buttered batter-cakes, with a soft toast and cup of tea at each meal; in addition, a little chicken for breakfast, and soup for dinner. Dressed blister with cerate simplex. Spine with mixture of equal parts of ol. terebinth. and ol. olivia. Two actions on bowels last night. Continue milk and wine, with ℥ss. paregoric at bed-time.

Called at 8 A. M. next day. Found him sitting up in bed. One action from bowels last night. Continue treatment and diet.

Called at 8 A. M. next day. Patient up and clothes on.



Allowed him to walk about the ward, but not sufficient to fatigue himself. Blister nearly healed. Continue diet and treatment.

Called at 8 A. M. next day. Found him up and walking about. Rests well at night. Appetite good. Consider him out of danger. Continue diet with the wine and milk. From this time on his diet was prudently increased, until his return to his command. ℥ss. of the following mixture was given him at each meal, as a tonic: ℞ tinc. pinckney bark ℥ii., tinc. ferri. chlor. ℥iss., tinc. zingiberis ℥i.; m.

CASE 2.—Was treated at Ocmulgee Hospital, Macon, Ga., in Sept. 1864. He was under charge of a med. officer, who informed me that he was received in hospital 8 days before, with congestive chill. (Malignant intermittent and remittent fever was then prevailing at Macon among those not acclimated.) The subject was a stout mulatto man, aged 30: apparently of a sanguine temperament. He died 3 days after with all the symptoms of Cerebro-Spinal Meningitis. Autopsy, 2 hours after death: Arachnoid congested, with effusion of plastic lymph over middle lobe left hemisphere of the cerebrum, causing adhesions. Pia mater greatly congested, especially between the convolutions: half pint of serum was discharged from ventricles and folds of arachnoid. Dura water congested at and near lateral and cavernous sinuses. Substance of brain apparently healthy.

CASE 3.—Admitted and treated at same hospital as No. 2. Subject a stout black man, aged about 25, of a strumous Diathesis. Six days prior to death was admitted in hospital with double pneumonia. He continued to grow worse for three days, when he commenced to complain of severe pain of the head, and in twelve hours was delirious, with great hyperæsthesia, in which condition he died.

Autopsy: Four hours after death "all the membranes of the brain congested, with effusion of serum in ventricles, and between folds of arachnoid. Great congestion at lateral

sinuses and base of brain. Both lungs in a state of red hepatization, except upper lobes. Pleuritic adhesions on both sides, with effusion in pleural cavity."

CASE 4.—This case occurred, in this city, in March, 1866. The subject was a negro girl, aged 8, of strumous diathesis. Was first attacked with influenza; in three or four days became delirious. An intelligent physician was requested to see her, and made two or three visits and quit. About ten days after its being attacked with influenza I was called to see it, and found it in the following condition: Decubitus dorsal; emaciation great; would not answer when spoken to; complete rigidity of cervical and dorsal muscles; pupils of both eyes dilated; eyes injected; bowels constipated; pulse one hundred, and very weak; temperature of skin normal.

Prescribed blister to back of neck, to be followed by application of resin cerate: sinapism whole length of spine, to be followed with oil terebinth. R Hydrar. chlor. nit. quin. sub. a. gr. xii., pulv. Doveri. gr. vi. m. ft. chart iii. S. One every hour; to be followed four hours after last dose, with ʒss. ol. ricini, which produced three or four dark operations by midnight.

Called next day. Patient much the same. Ordered R quin. valeriate gr. viii., ext. hyocyamus gr. iv., bisnuth sub. nit. gr. xii., tinc. opionis, rad. gtt. x. m. ft. pil. No. iv. S. One every two hours. Continue dressing to blister and spine. ʒii. paregoric, with hot pediluvium at bed-time. Diet, milk and rice.

Call next morning. Patient not so restless last night, but did not sleep much. One action from bowels last night. Continue treatment, with addition of sherry wine and milk.

Call next morning. Patient had two actions from bowels last night. Micturition free. Pulse 95, and more full. Delirium continues. Pupils still dilated. Continue treatment.

Call next morning. Patient about same as yesterday. Treatment and diet continued.

The next morning the patient was a little better: could talk rational: wanted to get up. Strict orders enjoined not to take her up, nor talk much to her; but keep the room quiet. Continue treatment and diet.

Called next day. Found her much worse. (Her mother, contrary to orders, had allowed her to get up and sit by the fire an hour.) Had one spasm last night. Ordered sinapism to the spine; to be followed with applications of oil terebinth. R Hydrar. chlor. mit. gr. xii., quin. sul. gr. vi., ext. hyoscyamus gr. iii., m. ft. pil. iii. 8. One every hour; to be followed in two hours after last, with oil ricini 3 ii. This produced three or four evacuations by bed-time. Camp. tinc. opil. 3 ii. at bed-time, with hot-pediluvia.

Call next morning. Found her in a low muttering, delirious condition. Renewed pills of quin. valer. hyoscyamus aconite and bismuth, with wine and milk.

Call second day after. Found her alive, much to my surprise. Continue treatment and diet.

Call next day. Her mother having to seek a new home, was getting ready to remove this patient to the freedmen's hospital. This terminated my connection with the case. I learned from the medical officer that she was in a comatose condition when admitted, and died the sixth day thereafter. The following developments were disclosed by a post mortem examination: "All the membranes congested, but no effusion of plastic lymph. Found pus and serum in ventricles. Substance of brain softened, with partial disorganization about the base.

**ETIOLOGY.**—As to the causes of this disease, I profess to know but little. Various opinions have been expressed; attributing it to cold, malaria, and other causes. All of which I consider mere theory, until I see more positive evidence in relation thereto. Its pathology we find from dissection. I consider it a disease *sui generis*, attacking the cerebro-spinal axis. As to treatment, the principle I consider safest, is, that it should be divided in two classes,

sthenic and æsthenic. Next, consider the diathesis of your patient, and treat accordingly. If complication exists, it will, of course, render the disease more perplexing, and the physician must use his own discretion. I should rely, in uncomplicated cases, upon antiplastics and counter irritants, in the outset; to be followed by tonics and stimulants prudently administered.

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## SELECTIONS.

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*A Case of Cerebro-Spinal Anæmia.* By R. C. HAMILL, M. D., Consulting Physician to the County Hospital, Chicago.

I was called to see Miss L., a girl in her thirteenth year, October 14th, 1865, and found her dressed, lying on the bed, apparently in good health. Her mother informed me that on the day previous, on returning from school, she complained of unusual weariness and weakness of the back, but no especial attention was given to it. On the following morning, when she attempted to get out of bed, she found herself unable to stand. In this condition I found her during the afternoon of that day.

Her case presented the following phenomena: Constant, but not severe pain in the head, located, according to her description, in the line of the great longitudinal fissure separating the hemispheres of the cerebrum—the pupils of both eyes were dilated to more than one-fourth of an inch in diameter. The posterior and central portions of the tongue were covered with a closely adherent grayish fur. Appetite bad for a week, and her bowels inactive rather than constipated. Skin and kidneys approximately normal in action. A subsequent analysis detected no albumen in the urine—a slight excess of acid was apparent. The action of the heart was marked by slight irregularity, but there was no suspicion of any organic disease—pulse 110 at the wrist, and soft. Inspiration 30 per minute, and irregular, evidently the result of a habit, contracted for some unknown reason—for under my direction she could breathe naturally, at the rate of 18 inspirations per minute, and with entire ease to herself. There was some tenderness along the whole course of the spine, with marked soreness in the lower cervical and upper two dorsal vertebræ, and in the lumbar region, extending as high as the last dorsal vertebræ, inclusive. There was no obliquity of the spinal column. Sensation was perfect everywhere, and she had complete use of her limbs, turning and rolling in bed without pain and with apparently as perfect ease and freedom as if in the enjoyment of full strength and vigor. It was only when she assumed the erect position that any want of control or

modification of motion could be observed on the lower limbs. She was unable to take a single step, unless the entire weight of the body was supported by the hands of attendants in the axilla of either side, and then the feet were rather jerked forward a few inches at a time, and in a manner such as to convey the impression that she was bending the entire energy of her will to the effort. The pelvis was thrown forward, the shoulders backward, and if not supported would invariably fall backwards. About two years prior to this time she had a severe attack of rheumatic fever, but I was unable to learn anything definite in relation to its history. She had on several occasions suffered from ascariæ, but not within the last six months. I was inclined to attribute the loss of power to functional derangement, due to verminous irritation, and in accordance with that opinion, ordered: *R* Santonin, *grs.* xii., *div. chart.* 4—one every four hours, to be followed by an aloetic pill. The bowels were freely moved, but no worms appeared. Infusion of quassia,  $\frac{3}{4}$  iv. per anum, on the next day was followed with the same negative result, and the verminous origin of the trouble was extinguished. For the purpose of stimulating the secretions, more especially that of the liver, the following pill was ordered once in twelve hours: *R* Pil. hydrarg. *grs.* xij., ext. hyosciami, *grs.* vi., ft. pill 6. Bowels moved once a day under the influence of the pills, and on the morning of the 18th, her tongue was quite clean, and she had some appetite for breakfast, but without other change in the case. Her pulse was soft and full, 110 to the minute; no febrile excitement; pupils dilated; pain in the head same. As a general nerve tonic and sedative, I ordered the following mixture: *R* Citrate of iron and strychnine, 3 i., chloric ether, 3 ii., infus. genitan,  $\frac{3}{4}$  xii., one tablespoonful three times a day, after meals, which was continued until the 1st of Nov.; accompanied by thorough frictions night and morning with a soft towel, but with no perceptible benefit, as far as locomotion was involved; on the contrary, she was more helpless than at the commencement of the treatment. The iodide of potash was now substituted for the strychnine mixt., *grs.* vi., three times a day, frictions continued. Nov. 10th complains of a sharp pain between the left mamma and along the intercostal spaces, for which tinct. *actæa racemosa*, *gtt.* xxx. three times a day, was ordered before meals; the iodide continued two hours after meals. She remained under this treatment to the 29th; pain partially relieved, pulse varying from 100 to 110. The improvement in the main features

of the case was scarcely perceptible, and I felt it my duty to call in professional aid. Dr. E. Andrews saw her with me, Nov. 30th, and after a careful examination of the case, gave as his opinion that the inability to walk was functional derangement, due to subacute inflammation of the membranes of the spinal chord at the origin of the lumbar nerves; that her diathesis was rheumatic; and that he should expect to find benefit from the use of colchicum in full doses until its cathartic effect was decided; then follow with full doses of *actæa racemosa*, and reduced quantity of colchicum. Accordingly, gtt. xx. of the *rad. colchici*, were given once in four hours. In about thirty-six hours free purging set in and the colchicum was discontinued. A Dover's powder was given at bed-time, and on the next day the following mixture was ordered:  $\mathcal{R}$  *Tr. actæa racemosa*, 3 jss., *vin. rad. colchici*, 3 ij., *misce*—gtt. xl., three times a day. The iodide of potash continued as before; croton oil to the spine, between the scapulæ; friction continued.

Dec. 15th. No relief. Her appetite, which was pretty good before, now began to fail. A short and constant cough, dependent on irritation of the laryngeal branch of the pneumogastric nerve, was a source of great annoyance. Her pulse was rarely below 110. The pain in her side much the same. She was surely losing strength without compensation in any other direction. This treatment discontinued, and I determined to address my efforts to the general health, and thus reach the nervous system through improved nutrition. With this purpose in view, the following mixture, in tablespoonful doses, three times a day, was ordered, at meal times:  $\mathcal{R}$  *Hypophosphite sodæ*,  $\mathfrak{D}$  xii. *chloric ether*, 3 ii., *infus. gentian*, 3 viij., *misce*. The croton oil, for some reason, failed to produce counter-irritation, and a cantharidal plaster, 2½ by 8 inches, was applied between the shoulders, reaching as low as the fifth dorsal vertebrae; frictions over the lumbar region and limbs, with salted crash as before.

Dec. 18th. The blister drew finely, and was permitted to heal. The pain in the side was quite relieved by the blister. She is cheerful, and expressed herself as feeling much better. The short, hacking cough continues, but not so persistently; sometimes stopping for an hour or more; otherwise, without material change.

Jan. 1st, 1866. A decided improvement during the last ten days was manifested in every way; pulse 100; cough more under control; appetite good. Is able, by the aid of a chair, to go from her bed to the opposite side of the room.

A pair of crutches were procured for her, and in less than two weeks she was able to reach all parts of the house, through their aid.

Feb. 15th. She was able to stand without assistance, and take a few steps. Cough continued; pulse 94; pupils dilated; says she feels perfectly well.

The subsequent treatment, which reached to the middle of May, consisted of the hypophosphite of soda, as above, and the syrup of iodide of iron, gtt. xx., three times a day, alternated once in two weeks. General frictions once a day at least, with a salted towel, were continued until the case was dismissed. Her recovery was slow but uninterrupted from the 1st of January until the middle of May, when she was permitted to ride on horseback, and was able, so far as I could judge, to endure as much exercise, without fatigue, as is usual for young ladies of her age.—*Chicago Medical Journal*.

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*"On the Law of the Sexes;" or the Production of the Sexes at Will.* By JOSEPH LE CUNTE, M. D., Prof. of Chemistry and Geology in the University of South Carolina, Columbia, S. C.

The following is a very brief extract, condensed from the American Journal of Science and Arts, for July, 1864, and Jan. 1865, of an important memoir of M. Thuny, of Geneva, and of an account of some experiments of M. M. Coste and Gerlee, on the law of the Sexes. The original memoir of M. Thuny was published in the *Bibliothèque Universelle* in 1863, but, as we have seen no notice of it in the agricultural or physiological journals of the South, we think the intelligent public, as well as the medical profession, will be interested in this abstract.

M. Thuny was first led to his conclusion by the following well known facts:

1. The fundamental or morphological identity of the sexes. From this he concludes that the difference of sexes is due to slight differences in the process of development of the ovum in its earliest stages.



2. That in plants, (those which are unisexual,) the character of the sex may be controlled by the management of external agents.

3. That, according to Huber, ova of the Bees, if fecundated early, produce workers, (females,) whilst, if fecundation be retarded until the 22d day, all the eggs deposited produced males.

For these reasons M. Thuný concludes that the sex is determined previous to fecundation, or rather by the maturity of the ovum at the moment of fecundation.

It is well known to physiologists that there is a development, and therefore a history to the ovum previous to fecundation. If no fecundation takes place, the development is arrested at a certain stage, and the ovum perishes: but if fecundation occurs there is a new accession to life's force, which suffices to carry it through all stages of embryonic and extra-uterine life.

Now, according to M. Thuný, during the earlier stages of the anti-fecundation history of the ovum, the sex is female; but if the development continues without fecundation it becomes male. By impregnation the sex is fixed forever. If, therefore, impregnation takes place while the ovum is immature, and its sex therefore, female, the embryo will be female; but if fecundation is delayed until a late period, when the sex of the ovum has become male, then the embryo will become male.

It is easy to see the important practical applications of the law. In uniparous mammalia the ovum leaves the ovary at the beginning of each rutting period in a very immature condition, and passes slowly through the fallopian tubes, the uterus, and finally, if unfecundated, is discharged.

Now, during the whole of this slow passage, the ovum is maturing. If, therefore, fecundation takes place early in the period of heat, the sex of the embryo will be female. If later it will be male.

The period of heat, or generative period (as Thuný calls it), here spoken of, must not be confounded with the season of heat, or rutting season. All farmers are aware, that during the season of heat there are regular *periods of exacerbation*, which in the case of the cow occur about every two weeks. These are the generative periods spoken of by M. Thuný. They are really menstrual periods, and, if attentively observed, are found to be always attended with slight menstrual discharges. Now, if M. Thuný is right, fecundation at the commencement of the menstrual period will

produce females, and later, will produce males. He does not indicate the exact turning point.

Anxious to subject his theory to the list of disinterested experiments, M. Thuny gave minute directions to M. Cornaz, an intelligent Swiss stock-raiser, and son of the President of the Swiss Agricultural Society. These directions were followed in 29 cases, and in every case, without exception the desired sex was produced. First, in order to propagate the breed of a very fine Durham bull, M. Cornaz wished to get heifers, he made 22 experiments and got heifers every time. He then wished to get a few bulls of half breeds to sell to his neighbors; he made seven experiments and got bulls every time.

In the case of multiparous mammalia and birds, the test is much more difficult, and the results contradictory. M. Thuny's observations lead him to think that in the domestic hen, "the last eggs laid are the cocks of the clutch." He accounts for this by supposing that in each generative period several ova commence to operate together, but are separated from the ovary successively, and therefore at the moment of fecundation, (which takes place in the oviduct), the last separated are the most mature. M. M. Coste and Gebre on the contrary, find that when several ova are fecundated by *one* copulative act, the first laid eggs produce cocks and the last hens. These results are in accordance with certain observations which are as old as Aristotle. This great naturalist observed that pigeons laid but two eggs, one of which produced a male, and the other a female. The celebrated physiologist, Flourens, confounded these results of Aristotle, and in addition proved that the egg first laid produced the male, and the other the female. These observations of Coste and Gerbe, and of Flourens and Aristotle certainly seem to contradict the theory of M. Thuny on hens; but that may be accounted for on his theory, by supposing that during a single generative period, several ova commence to develop successively, and separate successively at the same stage of development, and continue their development in the oviduct previous to fecundation. Being thus regularly arranged in the oviduct in the order of their ages, and therefore of their maturity. If all are fecundated by one copulative act, the most mature, or the males would be laid first. Embryologists must settle the important questions we have started. If definitely settled, then it would seem that experiments on hens were best adapted to test M. Thuny's theory; but until definitely settled, experiments on multi-

parous animals will avail little. In the meantime the experiments of M. Cornaz on cattle have never been controverted.

Such is a brief extract of the memoir of M. Thuny, and of the experiments of M. M. Coste and Gerbre, intermingled, however, with some explanations of our own, in order to make the whole more intelligible. We would like to see the subject taken up by some of our intelligent stock-raisers.

The great importance of the theory, if true, both in a scientific and practical point of view—both to the physiologist and the farmer, can not be doubted. But the history of the theory can only be accomplished by intelligent and very careful observers. The physical signs of the generative period differ in the different species, and in different individuals of the same species, particularly in domestic animals. It is always well marked in wild animals, but in domestic animals it is often obscure. Close and patient observations will, however, overcome all these difficulties.—*Nashville Journ. Med. and Surg.*

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*Infantile Convulsions.* By A. P. MERRILL, M. D.

In city necrology, the term "infantile convulsions" is generally made to include all the convulsive diseases of children that may be reported, whether they appear in the form of trismus or *tetanus nascentium*, or other kinds of tonic and clonic spasms, ending in destruction of life. The disease, in one form or other, prevails extensively, at all times and in all places, throughout the habitable globe, causing great mortality.

The causes which have been assigned to it are so many and various that it may well be doubted whether its etiology is better understood now than at first. Much has been written of its pathology, also, but with such uncertain aim that scarcely any two authors agree, except in regard to the fact that a certain disorder of the nerves exists, producing more or less vascular congestion. The treatment of the disease has been so varied, and remedies have been so multiplied, with such small influence over results, that grave

doubts are entertained by many as to the efficacy of medical treatment of any kind ; and we even find prominent physicians claiming, as the result of their experience, that it is often advisable to intrust the suffering victim to the curative powers of nature alone ; and contending, especially in cases affecting very young infants, that all known remedies are wholly ineffectual. In more advanced childhood spontaneous recoveries more frequently take place, and the disease is often cured by active medication ; but the new-born babe is doomed by convulsive disease to almost certain death. So well is this understood that in many cases a physician is not called in, and remedies of any kind are only applied sparingly and without skill.

In regard to causes, we have been strangely told of certain displacements of cranial bones, as if in distrust of nature in preparing the head for the pressure of birth, and for recovery afterwards ; and quite as strangely of the careless excision of the cord beyond the ligature, where cutting or tearing could have no influence over the point of junction with the body ; and we have been told of exposure to cold, of filthy habits of life, of hereditary taints, of indigestible food, constipation, diarrhoea, worms, and teething ; and a variety of remedies have been devised for these particular exigencies, but the death-rate is not decreased. In all large cities asylums are provided for poor and homeless infants, nurses are duly trained and instructed, physicians of eminence devote their time to the treatment, the materia medica is explored for remedies, nostrums are invented and applied without limit, all phases of charlatanry claim the confidence of the public, and still the death-rate remains the same. Convulsions continue to decimate the human race in early childhood, and to people the cemeteries with infant dead.

Like many other fatal diseases, infantile convulsions produce the largest mortality in hot climates and in marshy districts. This, coupled with the fact that in many cases the periodic movement is undoubted, and with the equally important fact that whenever an intermission is secured, anti-periodic remedies are most efficacious in affording relief, affords us good reason for believing that these convulsive diseases are of a periodic character, and due to malarial influences. But the greatest mortality is with new-born babes, sometimes attacked as early as the second day after birth, and these rarely survive the first convulsion. With them, therefore, there is no means to determine the question of periodicity, for there is no reaction, no intermission, and

no return of the disease as in intermittent fever. It may be supposed, too, that the period of exposure and of incubation are in such cases too short. Yet it is by no means improbable that the exciting cause may have reached the infant through the medium of the mother, or that under hereditary influences the predisposition of the child may have been such as to reduce the incubative period to a single day. Be this as it may, there is abundant evidence that the mother often suffers from periodic fever, while the infant is suffering with convulsions, and antiperiodic medicines have been found remedial and prophylactic for both.

In the treatment of infantile convulsions, I have known physicians to depend mainly upon quinine, given generally by enema, during the continuance of the spasms; but the more common practice is to give emetics of ipecacuanha, and to apply mustard and hot bathing, with stimulating and purgative enemata. Mustard is a powerful remedy in this and other congestive diseases. I have used it with satisfaction in baths, by sinapisms, by enemata, and by the stomach. But all these means are inferior to blood-letting in giving relief to the spasms. Great care and skill are required, however, in bleeding young children in congestion from chill, lest they sink under the operation and die from exhaustion. Blood must be drawn in such cases in small quantity at a time, and the operation must be repeated as recuperation takes place, and the child can bear it. It is prudent, too, to conduct the depletion under pretty active stimulation. In proportion to the severity of the chill and the congestion accompanying it, is the danger of prostration from the sudden loss of blood; but in the same proportion is the necessity for the remedy, and its efficacy, when properly applied. Reaction is not only secured and convulsions relieved, but the resulting febrile exacerbation is less violent than under the other treatment above referred to, and the subsequent intermission is more complete.

In the selection of cathartic remedies I have found calomel to be the safest and the most efficient, not only in this, but also in most other diseases of children, and the younger the child the more it is to be preferred over other remedies of this class. An infant may take a quarter to a half grain of calomel the day it is born, with less risk of injurious effects than from any other cathartic. Opium, on the contrary, which is so frequently resorted to, I consider an exceedingly dangerous medicine for infants, and especially when they are very young. The cordials and soothing syrups

in such general use depend upon opium in some form for their composing effects, and frequently they do compose and soothe the suffering babe, to the great relief and satisfaction of nurses, but to the injury of the child, sometimes even to the destruction of life. The healthy action of the digestive organs so necessary to the health of all persons, is especially so to infants, and nothing so readily deranges infantile digestion as opium.

From all the teachings of experience in regard to this matter, there scarcely seems to be room to doubt that infantile convulsions, which are so prevalent, and destructive to life, are, when not dependent upon organic lesion, or traumatic irritation, mostly of a periodic character, and produced by the congestions consequent upon the cold stage of fever. In the adult subject the tendency of these congestions to produce convulsions is very strong; and in the puerperal state, in yellow fever, and in the graver forms of bilious remittents, general convulsions are not an uncommon concomitant of the initiatory chill. Females are more liable to febrile convulsions than males. Children of three to five years of age are more subject to them than adults; and it is rarely the case that a child less than a year old suffers with any considerable severity without more or less of spasmodic action, showing that the predisposition to convulsions is in some proportion to the degree of nervous irritability. In young infants the premonitory signs of an attack are crying and refusal of food, followed by coldness and a purple hue of the hands and feet, with clenching of the fingers and toes.

It may be objected that the persistency of spasmodic action in young infants is evidence against the existence of periodicity; and it may be contended that the subsidence of the chill should be followed by an intermission of the convulsion. But it must be considered that spasm once produced by congestion of the nerve centres, or of the larger blood-vessels, as the result of disorderd innervations, soon becomes habitual, and may continue after the primary conditions producing it are measurably relieved; or, it may well be supposed that the relief of congestion on subsidence of chill may be only partial, still continuing to exist to such extent as may be necessary to keep up spasmodic action, just as many symptoms of chill in the adult subject often remain after reaction is established. Without entire relief of the abnormal nervous action, the irritable muscles will continue liable to convulsive movements until the vital

powers are exhausted, or the convulsions will intermit for short periods of time from temporary exhaustion, to recur again with increased energy as cerebral and nervous power are partially restored by comparative rest. The disease, in fact, loses its periodic character in the intensity of the morbid lesions produced by it, and becomes a disease of local congestions and inflammations, with convulsive manifestations as their effects, and as evidences of their existence.

The most effective remedy yet discovered for convulsions arising from congestion is chloroform, used exclusively as an internal remedy. Its full physiological effect, as evidenced by sleep, is certainly remedial of that disordered innervation which causes congestion and chill. Whether the disease attack the child during the first week or month, and is called trismus or tetanus, or seize upon older children in the form of tonic or clonic spasm, chloroform internally, in proper doses, always affords the best chance of relief; and when relief is thus obtained the paroxysm is not likely to return. Preventive measures should not, however, be neglected, especially in malarial districts. Quinine should be given to both mother and child, and, if practicable, there should be a change of residence to avoid the influence of malaria, for it is difficult to guard against a return of the disease, especially at septenary periods, while the cause is constantly acting.

Chloroform is best given to young children in milk; but if the spasm is severe and persistent, deglutition is proportionally difficult, and in that case the remedy is poured gradually into the mouth without the admixture of vehicle, taking care that it does not spread over the skin of the chin and neck. The mucous membranes suffer no injury from this contact of pure chloroform, beyond the very temporary effect of the stimulation; but the skin sometimes is vesicated with subsequent ulceration. I have given to infants within the month from one to five drops every fifteen or twenty minutes until the spasms were relieved and sleep secured. For older children the dose may be increased in proportion to the age and the vigor of constitution, and be repeated according to the intensity of the disease. I have given a teaspoonful to a child three years old, undiluted, with the happiest effect; and to one five years old I have given the same quantity, and for want of entire relief repeated the dose in twelve minutes with success. This was a case of severe and long continued convulsions, with great prostration of vital energy, which seemed to require such

quick repetition of the dose lest death might ensue. The child slept and recovered.

In my treatment of various forms of disease by the internal use of chloroform, given in hypnotic doses, it has sometimes happened that the patient has afterwards enjoyed much better health than previously. This, taken in connection with the fact that chloroform is powerfully destructive of insect and animalcular life, and in connection with the success of the remedy as a vermifuge, affords reason to suppose that one of the important benefits to be derived from such treatment is to rid the system of worms, and of every kind of animalcule and morbid germ, whether existing in the cavities or the solids and fluids of the body; for the stomach and bowels cannot be charged for any length of time with the vapor of chloroform, into which the doses given are very soon converted, without pervading the whole circulatory system, and making itself manifest in every secretion and excretion of the body. No extraneous vital organism can, by any possibility, escape its destructive influence. This gives to the internal exhibition of chloroform a range of usefulness far exceeding that to be derived from its remarkable efficacy in disordered innervation merely, and makes it the most valuable of all the remedial agents yet known to man. Indeed, when we consider the large proportion of fatal diseases, both to men and animals, which are supposed to be attributable to the influence of entozoa and various kinds of animalcula, this feature in the internal use of chloroform possesses a value which can scarcely be overestimated.—*Med. Record.*

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*Antidotes for Strychnia.*—Prof. R. Bellini, after conducting a long series of experiments on poisoning by strychnia, and its salts, arrives at the conclusion that the best antidotes are tannic acid and tannin, chlorine, and the tinctures of iodine and bromine. These, he maintains, do not act chemically on the poison, but only through the astringent effects produced by the acid on the mucous membrane of the stomach.—*Cincinnati Lancet and Observer.*



*Chronic Pharyngitis.* By J. R. BLACK, M. D., Newark, O.

Too true is it, that the majority of physicians give anxious thought and care only to diseases of a grave or very painful character. Even in our journals, the minor ills (of which chronic pharyngitis is a fair example) are almost wholly ignored. Like many cutaneous affections, it is neither dangerous nor painful, but yet how annoying its existence often is to the physician, as well as the victim. The honorable and the honest among our patrons, mingle esteem and gratitude, with their dollars, to him who rids them of such troublesome and disturbing pests.

It is perfectly true that the duties of the physician are so numerous, so diverse, and so complex, that long and careful study, cultivated and critical observation, logical mind, and a very retentive memory, are essential requisites to great excellence and skill in every department of this, our wide field. It is the very few who possess, to a marked degree, such unique endowments, and there is therefore much to apologize for our imperfections. The only censure that can rightfully attach to our shortcomings is when carelessness, neglect, or conceit hinders, or altogether prevents our improvement. It is not of will, or of province, to act the censor; but this may be said of those too indolent to read, and learn that they deserve pity: and those whose greatness and self-rated importance have swelled up within them so as to preclude any ideal endosmosis, that they can not command love, respect, or veneration. Thankful on my part for what the periodical press, with its thousands of noble contributors—laboring for the common and God-like weal—have done for me, I shall endeavor to give my mite, in small requital, in this, as in other efforts.

To describe the lingering inflammation which is of commonly seen upon one or both tonsils, and along the pillars of the soft palate, would be entirely superfluous. Its extension also down the pharynx, or up into the posterior nares, are familiar facts. Its various stages and degrees are also to be daily seen, running from a simple smooth redness and swelling, to follicular, and honeycomb ulceration. The amygdalæ, especially in scrofulous subjects, are more or less permanently enlarged—in many instances almost blocking up the isthmus of the fauces. The common effects are stiffness and soreness of the parts, often slight pain in deglutition, and a discharge, by hawking, of more or less glary mucus,

frequently mingled with pus cells. The constant irritation and expectoration are very commonly aggravated by every slight exposure, and at such times there is usually a manifest disposition of the disease to extend downwards upon the glottis into the larynx and trachea. The symptoms in this event are a slight hoarseness, an ever recurring effort at swallowing, and an effort to clear the throat, with cough, and a rough soreness along and behind the sternum.

The young practitioner who relies upon the text-books as guides in the treatment of chronic pharyngitis, will commonly find his mind very much afloat as to what it is best to do. If he has studied the teachings of Dr. Horace Green, the topical treatment by *nitras argenti* will probably be quickly adopted. If those of Prof. Flint, he will endeavor to follow his precept of making "the object of treatment, in short, to restore the general health," whatever that may mean. One authority thus relies mainly upon the topical, the other upon the general treatment. There is doubtless truth in both systems. When the general health is toned high enough, the continuance of a minor ailment like this is rendered impossible. But such toning is very seldom possible, or practicable. The very existence shows a state of the system, or a local predisposition, fundamentally faulty. This may be inherent, or developed. If the former, then we can not hope to remove it; if the latter, then there is hope in hygienic rules. But the disease is often found in persons whose general health appears otherwise unexceptionable; and in such cases what is the course to be pursued? In a majority of cases, the most persevering use of the nitrate of silver does not satisfactorily control, much less cure the disease. At least such has been the experience of the writer, and to those whose observation on this point has been identical, the following treatment is commended to their attention:

In those examples in which there is no obvious general indication to fill, one or the other of the applications to be mentioned have rarely failed to give prompt relief, and when persevered in to effect a radical cure. R Tinct. Iodine, Inod. Glycerine, aa  $\frac{3}{4}$  ss., Bals. Fir.  $\frac{3}{4}$  j ss. Apply to the irritated or ulcerated parts, once daily, with a camel's hair brush. This preparation diffuses itself rapidly over the fauces, soothing the irritation, and clearing the throat by free expectoration. When the inflammation has extended into the nasal cavity, the most convenient and practicable mode of reaching it with the medicine is by insufflation. Pour half a teaspoonful into the palm of the hand, or on a bit of sized paper,

apply closely to the nostril, close the opposite one with the finger, and give a forcible inspiration. In case the disease had extended into the larynx, and become chronic, the tincture of iodine mixed with spirits of ether, comp. and used by inhaling the vapor, gives very gratifying results. A very good inhaler can be extemporized from a quinine bottle. Fit two good quills into a tight cork, one end of one extending an inch or two into the liquid. To the superior end of the one not dipping the liquid, attach a gum elastic bongie, with a mouth-piece. This may be used once or twice daily.

From some idiosyncrasy, or other inexplicable reason, the above remedy does not always have its usual curative virtues, in which instances the following elegant preparation will be found strikingly beneficial. The active ingredient is the same used in Luly's patent nostrum.  $\mathcal{R}$  Hyd. bichloride, grs. viii.; Ammon. murias, grs. xx.; Inod. glycerine; Aqua rose, aa.  $\mathfrak{z}$  ss.  $\mathcal{M}$ . Apply as above, though greater caution is required against swallowing any of the mixture.

The immediate effect of either remedy is an amelioration of the more prominent symptoms, and to insure a radical cure, the main point is to use them perseveringly. When in young subjects, the marked scrofulous diathesis is associated with an all but permanent enlargement of the tonsils, great benefit will be derived from the following internal remedy:  $\mathcal{R}$  Fl. ex. Lappa Maj.; Fl. ex. Revmex obt. aa.  $\mathfrak{z}$  j.; Tr. G. Guaiac,  $\mathfrak{z}$  ss; Tr. Columbo,  $\mathfrak{z}$  j.  $\mathcal{M}$ . Teaspoonful thrice daily. In this way the necessity of their excision may be frequently obviated.—*Cin. Lancet*.

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*On the use of a Spider's Web as a Styptic.*—On one or two former occasions I have written something on the use of the spider's web as a styptic in cases of excessive hæmorrhage after extracting a tooth. I now wish to add the result of my experience in another case. I do it with the hope and belief that it may be an essential service to some of my professional brethren, and perhaps to some of their patients. It may be thus serviceable on two accounts. First, it can always be obtained, and everywhere, sometimes when other more

popular remedies cannot so readily be obtained ; and second, because in my hands it has proved efficient where everything else has failed.

About a year ago a man, about eighteen years of age, came to my office to have a lower molar tooth extracted. I examined the tooth, took my forceps and extracted. The operation required rather less force than usual. The tooth came out entire, and clean, and with no laceration of surrounding parts, except the necessary severing of the periosteum. But from the first blood flowed more freely than usual. I directed my patient to rinse his mouth with cold water, which he did considerably longer than the usual time of the flow of blood in such cases, but with no diminution of its flow. I then applied tannin on pledgets of moistened cotton, filling the socket with them. After repeating this application two or three times, the bleeding ceased, and he left. In about three hours after he returned, bleeding as profusely as ever. I then filled the socket from whence the tooth came with cotton saturated with perchloride of iron. This I repeated several times, with a delay of a few minutes between the applications, without any apparent effect. I next applied the persulphate of iron, full strength, in the same manner, and with no better result. Finally, I procured some spider's web, with which I filled the socket, as I had before done with the cotton, when—I need not say that I was gratified to see—the bleeding stopped almost immediately, and there was no recurrence of it. A. R.—*Dental Cosmos*.

## EDITORIAL AND MISCELLANEOUS.

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### SALUTATORY.

I take this method of announcing to the friends and patrons of the Atlanta Medical and Surgical Journal, that I have become associated with Professors J. G. & W. F. Westmoreland, in the editorial management of it. It is not without an unfeigned distrust of my qualifications that I have done so; nor can I hope to equal, much less to excel my co-laborers in the field, thus newly opening before me. But I am impelled by an unaffected love of the profession of medicine, to which I have devoted a life not now short, with earnest zeal, and all the capacity nature has endowed me with.

My achievements in the profession, and my opinions, may be pronounced by those better qualified to judge them, a failure. Be this as it may, I am moved by a sense of duty, to give to the brotherhood of medicine, an epitome at least, of my long experience and observation, with the hope that my failures, if not my successes, may be of some use to the more youthful devotees to medicine, in inducing them to shun the quicksands of error, and false theories, the every day stumbling block of the idle and lazy, and of exalting their ambition to a just appreciation of the lofty dignity of the profession, as illustrated by Rush, and Physic, and Chapman, and Drake, and Eberle, and thousands of others living and dead, whose names will shine forever upon the canvass of time. No matter how well he may understand the elementary principles of medicine, it requires great energy and industry, practical wisdom and judgment, and inflexible honesty, to enable the Physician to stand acquitted at the forum of conscience, where every word and work should be tried.

By the consent of all enlightened people, the Physician holds an exalted place in society. He is not only a preferred

guest of the household, but is received into the inner temple of their hearts, and intrusted with the most delicate duties and privileges. If his integrity remains spotless, and all his doings shall have been dictated by an enlightened judgment, he can stand at the close of such a life, as if upon an eminence, and looking back upon the pleasing picture, say with the inspired man, "I have fought a good fight."

This Journal will for the future, as in the past, be open to all Medical Philosophers, who may desire to communicate their views to their brethren, and contributions are respectfully solicited.

The late unfortunate civil war, whilst it has beggered and panoplied our land with curses, has not been without compensating results, so far as Medicine and Surgery are concerned. The doubtful problem of Resections, Wounded Joints, Hospital Gangrene, Piemia, &c., &c., but little discussed before the war, and still less understood, are now widely known. Men of small pretensions in this important branch of science then, are to-day knocking at the door of fame, and well do they deserve the honors they have won.

In Medicine, as in Surgery, the progress is magical. Humoralists and solidists have alike given up their hobbies, and embraced the great idea, that the Cerebro-Spinal system is the centre of morbid energy—the source of organic election, and the portal that leads on to pathological truth. The rubbish of centuries is being cleared away—the magical influence of standard authorities and names, is rapidly becoming a part of the great past. Whilst the sheen of glittering generalities—the bane of schools and the enemy of true progress—becomes "their air," before the experience of twenty thousand Medical Philosophers, each armed with his record of facts. A new era in Medicine and Surgery dawned with the war, to eclipse in benefits to mankind, let us hope the fame of its mighty chiefs. Let us snatch from the ruin one trophy at least, and for this purpose, we appeal to the brotherhood of medicine, North and South, to be true to themselves and to humanity, in laying the foundation of progress broad and deep, to the honor of the present and the glory of the future of our noble profession.

JNO. M. JOHNSON, M. D.

## ADDRESS.

*A Voice from the Chemical Lecture Room of the Atlanta Medical College.*

To the survivors of 2,500 Medical Students, to whom it has been our privilege and pleasure to lecture during the last 26 years—800 of whom have, at various times, borne away from our Annual Commencement, the humble name of the writer upon their several Parchments of Graduation—this communication is respectfully and affectionately addressed.

It may not—nay, it will not meet the eye of *all* of them; but those to whom the medium through which it is presented may be accessible, will recognize in the signature appended, the name of an old and sincere friend of their scholastic years. Time, it is true, has not failed to leave its impress upon the physique of the Lecturer; but memory, busy memory, true to her task, brings up, in vivid reminiscence, the thousands of pleasant, and, he trusts, profitable hours, in which—surrounded by the paraphernalia of Science, and drafting heavily upon her laws—we canvassed together the wonders of the organic universe, in its chemical combinations and their compound results, traced the mysterious phenomena of life through the complicated mechanism of the human body, extending our researches through the labyrinths of Physiology, Pathology, and Therapeutics, that the inquisitive young minds, thus scientifically trained, might be amply panoplied for the professional responsibilities of after life.

But these halcyon days “are numbered with the years beyond the flood,” to be known no more, and many of you have been since called to encounter the stern realities of a “co-minus” struggle with the adverse fortunes, the incorrigible prejudices, and the palpable ills, incident to your current career. Nay, some of you have grown gray, amid professional toils, since we met in the last grateful interview around the Laboratory table.

But still, amid the pauses of life's cares, you frequently and pleasantly recur to the years of your medical pupilage, and kindly remember the incidents and the friends of “auld

lang syne." The Colleges of your early choice, however, still live to give annual paternity to your destined successors in the high walks of professional enterprise.

If, indeed, those to whom he addresses himself still feel an interest in the writer, and his connections with public life, they will benevolently tolerate the communicative view of the present article, in which, for the *first* time, he has ventured publicly to indulge, and may *never* indulge again. He still occupies the chair, then, of general and Medical Chemistry, in the Atlanta Medical College, with whose past history and modes of instruction many of you are experimentally acquainted. But its present status and popular claims, since its resuscitation from the paralyzing shock of war, demands some notice at our hands. It has held two sessions since its re-organization, and on the first of May next, will open its Halls—D. V.—for a regular didactic course of instruction; and with flattering prospects of success, will enter upon a more vigorous outlay of its energies, and an ample display of its resources. By the aid of a noble and generous appropriation of \$5000, on the part of the City Council of Atlanta, the whole building and its surrounding enclosure have undergone thorough repairs: while its large and well ventilated Lecture and Dissecting Rooms, its pure atmosphere, and its delightful and refreshing water, whose mid-summer temperature is 58 degrees of Fahrenheit, furnish no inconsiderable attractions to medical students who consult their personal comfort while engaged in their pursuit of medical knowledge. Its suit of Chemical and Philosophical Apparatus, laid in under our own eye, and many of them manufactured to order, is one of the most magnificent and complete which can be found in any College, North or South. Two hundred dollars have been recently expended to make some select additions to the stock, and repair the injuries sustained by the war.

A Hospital has been built on the College grounds, in which, from 60 to 80 beds are constantly filled with the suffering poor of the country; and a regular Dispensary, established by the Faculty, furnishes from 15 to 20 cases daily, of such



indigent sick as can come or be carried to the College for prescription and treatment in the presence of the class, and to which they have free and constant access. The facilities thus furnished, therefore, for the attainment of practical knowledge, adapted to the management of diseases peculiar to our Southern latitude, are already of a high order, and will continue to be increased, rather than diminished; while a full, competent, and experienced Faculty stand ready to do their whole duty in this important field.

The city, itself, has been re-built with unexampled rapidity, and now contains, probably, 5,000 inhabitants more than before it was dismantled and destroyed. Board is readily procurable, and abundant supplies of Drugs, Medicines, Books, and Instruments, are at the students' command, on terms as moderate as the times will justify. And here it may be proper to add, that the intelligent population of the place have ever extended a cordial welcome and the genial courtesies of life to the young gentlemen of the College.

In conclusion: While the writer would be greatly gratified to receive the kind consideration and patronage of his old students and friends, and greet a large and intellectual class at the approaching session, in furtherance of the prosperity of the College with which he is identified, yet he could only feel warranted in the expression of such a desire by a thorough conviction of its legitimate claims to public confidence, the high character of its medical instruction, the faithful and unsparing devotion of the Faculty to the interest and comfort of the student, and their fixed determination, ever to conform to the established code of medical ethics adopted by the associated wisdom of the profession, and within its appropriate sphere. Nor is he an exclusionist in his views. He encourages no invidious or ungenerous allusions to other kindred Institutions. They have their respective claims to an honorable and useful career, and a selfish and unscrupulous antagonism is below the dignity of the noble profession to which we all belong. With one of these Institutions he labored for 19 consecutive years, in the chair of Chemistry and Pharmacy. The members of its

Faculty were his dearest friends, and the disinterested kindness of some of them, in a time of deep affliction, and even since his withdrawal from their body, *will be cherished in life-long remembrance*. In the language of the immortal Webster, then, he "thanks God that if" he is "gifted with little of the spirit which is said to be able to raise mortals to the skies," he has "yet none," he trusts, "of that other spirit, which would drag Angels down." If the professional resources and intrinsic merits of the Atlanta Medical College, therefore, are unworthy to command public confidence and patronage, *let her fall*. But a nobler destiny, we believe to be hers, and with an abiding conviction of her work and rising prosperity, we cordially commend her to the support of a generous and enlightened public. An active and vigilant Board of Trustees throw the shield of their protection over all her external interests, and she launches afresh upon inviting seas.

A full Circular, containing all the particulars necessary to be known, preparatory to the opening of the approaching Term, on the first of May next, has been published and widely distributed.

With a deferential and respectful regard for the opinions of those to whom the foregoing communication is addressed, the writer subscribes himself,

Very truly, Yours &c.,

A. MEANS.

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### NEW BOOKS.

We have received the following new publications from the enterprising Publishing House of Henry C. Lea :

*A Treatise on Principles and Practice of Medicine, designed for the use of Practitioners and Students of Medicine.* By AUSTIN FLINT, M. D., Professor of the Principles and Practice of Medicine in the Bellevue Hospital Medical College, and in the Long Island College Hospital: Fellow of the New York Academy of Medicine, &c. Second Edition revised and enlarged.

This work has been before the profession but little more than a year, and has already reached a second edition. It

evinces much patient labor, and, in its style, meets our views of such a work. The reputation of Dr. Flint guarantees to the profession a reliable standard authority, and as such we commend it to public favor.

*A Practical Treatise on Fractures and Dislocations.* By FRANK HASTINGS HAMILTON, A. B., A. M., M. D.

Professor of the principles of Surgery, Military Surgery and Hygiene, and of fractures and dislocations in Bellevue Hospital Medical College: Surgeon to Bellevue Hospital and to the Charity Hospital, New York: Professor of Military Surgery, &c., in the Long Island College Hospital: Author of a Treatise on Military Surgery. This Edition revised and improved—Illustrated with two hundred and ninety-four wood cuts.

We have not had time to peruse this work. We will do so and give our opinion of it. Its mechanical execution is very fine, and the wood cuts are equal to any we ever saw.

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### CRIMINAL ABORTION.

We noticed a few weeks since, a small work on this subject, and made such extracts as would lead to a knowledge of the general character of the book. We then expressed the wish that every man and woman could have the facts there expressed, always before them. We find in the St. Louis Medical and Surgical Journal for December, an abstract from the report of Dr. Thaddeus A. Reamy, of Zanesville, made to the Ohio State Medical Society. We give it entire as found in the Journal:

"This subject is not introduced from choice. It is a painful duty which I can not refrain from discharging. Six years ago one of the most acute observers and one of the ablest members of this Society, then Chairman of Committee on Obstetrics, when speaking in his report of the evil, made the following prediction: "The time is not far distant

when children will be sacrificed among us with as little hesitation as among the Hindoos." That prediction seemed to me at the time it was uttered, as it doubtless did to many of you, an extravagant one. But six short years have almost brought its literal fulfillment. Great God! What a state of morals for a Christian people, boasting a high degree of civilization. In my correspondence upon this subject I have found considerable reticence among medical men; many are inclined to evade a direct answer. This grows out of the delicacy of the subject, doubtless. But from a very large verbal and written correspondence in this and other States, together with personal investigation and facts accumulated, I am convinced that we have become a nation of murderers. And the victims are innocent, helpless children! Things may as well be called by their proper names. This practice is much more prevalent in the cities than in the rural districts; nevertheless, even in the country to a frightful degree. The physician is consulted as to how pregnancy can be avoided; or if it has already occurred, how can it be got rid of. With as much coolness and business-like composure, and that by the fathers or the mothers, as would characterize a consultation with a gardener as to plucking weeds from flowers. I doubt whether there are a half dozen practitioners present to-day who have not been consulted within the past year repeatedly in such cases. "We have as many children as we want," "my health is so poor I cannot bear children," etc., are phrases familiar to every physician. And be it remembered, these applicants are not confined to the poor, the indigent, or the ignorant; they are from all classes. This is one of the most alarming features of the case. The mania to destroy has gone into every avenue of society. The lettered and unlettered, rich and poor, professed christian and sinner, throng in one great mass the bloody altars, and sacrifice their offspring.

The deity who presides at such an altar ought to be carved in brass, and a copy furnished to every household which has been, or is likely to be cursed with such worship. It ought to represent a woman in the act of strangling an innocent, sweet-countenanced child; her features contorted with the heartless visage of her cruel purpose; and the second figure should represent her husband, or some lady friend, plugging her ears lest the cries of the child might move her to sympathy. Her eyes should be intently fixed upon an object in the distance, that she may not catch the countenance of the infant and behold it in the image of God, and thus be

deterred from her bloody purpose. If a physician informs them when applied to, that he can not consent to such a thing, that it is murder, he will quite likely be informed that if he will not some others will; and it is to be greatly feared others do. Women learn these things from each other; many of them follow it for themselves and friends. They will use knitting needles, whalebones, a catheter, or some other instrument—rupturing the membrane. And the practice is not confined to the first three or four months of pregnancy. So intent are they, often that if success has not attended their efforts sooner, when quickening occurs, instead of having a mother's sympathy aroused, and solicitude for the welfare of her offspring, she is only reminded that she must be prompt in dispatching it before it is larger to give her trouble.

The bloody command of Pharaoh to the Hebrew midwives, that when they did the "office of midwife to the Hebrew women and saw them upon the stool, if it were a son they should kill him," has always called upon the head of that king our execrations; he has been held as a heartless monster. We have looked with horror upon the practice of the Romans in the dark ages destroying their offspring, both before and after birth, as portrayed by Juvenal in his Sixth Satire; and we have rejoiced as the mild influence of Christian civilization has controlled and enlightened the minds of the people and abolished his custom. We have wept over the heathen mother who throws her child into the Ganges as a sacrifice to her imaginary God; and we resolved to give liberally to the missionary fund that she might have the light of a better gospel. And we have made similar resolves as we read the accounts of the baby tamers in China and India. Pharaoh was a wicked and ambitious king, who had natural enmity against the Hebrews, and was jealous lest they who had been his slaves might become his conqueror. This bloody edict was therefore one of national policy. The Romans and Chinese were ignorant heathens, who knew but little of the claims of humanity, and nothing of the obligations of the Christian religion.

But what shall be said of Christian mothers murdering their offspring without cause and without conscience? And what of physicians who lend their influence and counsel in behalf of such deeds? This earth is far from being regenerated. The dark waters of the Ganges foam with the struggling of heathen infants offered in sacrifice; the bones of thousands of murdered children are bleaching at the base of the baby tamers in China. But in Christendom, yea, in our

own beautiful Ohio, there prattle around the hearthstones of cottages and palaces, children who have dead infant brothers and sisters, hidden and unnamed, who were murdered by their parents' hand. What mockery for the voice of evening and morning prayer to be heard, asking God to bless and protect "Willie" and "Ellie," while from the same heart from which goes out the prayer went out the determination to destroy an unborn child! In many instances the pages of the sacred volume are turned for the reading of the morning lesson by the very hand that so recently directed the weapon for destruction. Can God hear with favor, the prayer that goes up incensed with the blood of murdered innocence? There are but few communion boards in this or perhaps any other country which have not among those who surround them at every season persons guilty of this crime.

But this subject is too revolting to contemplate. I must leave it. No doubt, some will think I have overdrawn it, or given too much time to it.

I know it is not overdrawn; and if not, too much importance can not be attached to it. It is blighting the health of thousands of women; causing ulcerations, displacements, and inflammation of the uterus. In its secondary results, it is one of the most prolific sources of moral prostitution. It is with fearful rapidity prostituting woman from the noble and God-given embodiment of virtue, innocence and affection, which has and always should make her an object of adoration and tender care, to a cruel monster whose level is far below the brute. It is filling our countries with mothers who have either committed suicide and infanticide or secured the services of a friend more skillful than themselves. I once attended a woman, wife of an intelligent, kind-hearted husband in good circumstances, mother of three lovely children, a devoted and prominent member of a Christian Church. She aborted, despite all my efforts to prevent it. She was over four months advanced. Grave symptoms supervened; purulent absorption was manifest. She died on the sixteenth day. An autopsy was had by myself and a medical friend. She had perforated the uterus very near the os with a wire which was in a male gum catheter, the wire having been thrust through the catheter in her violent efforts to destroy the fetus. The veins throughout the whole system were filled with pus. She confessed to me, on the third day of her illness, that she had brought on the abortion in the way named. I attended her funeral; her minister preached her to the pure Paradise of God. She had committed murder

and suicide. The custom is making homes that ought to echo with the matchless music of prattling children silent as the murderer's cave; the air that should be fragrant with the flowers of their planting and care, is loaded with the stench of detached and putrid ova. In short, the practice is eating as a cankering mildew at the very vitals of our holy Christianity, and unless speedily checked, will damn us as individual communities and as a nation.

What can be done? I answer, much. Medical men, from their intimate relations to the families which they attend, and from their acknowledged acquaintance with the whole subject, can command respect for their counsels in these matters, above all others. Let every honorable member of this Society, and of the entire profession, whenever consulted by a woman on this subject, candidly and patiently explain to her the nature of the crime she contemplates—set it before her in its true character.

The opinion has become prevalent among women, that if the child be destroyed before quickening, no sin attaches to the act; and that if the separation of the foetus takes place after quickening, but before viability, though it be somewhat sinful, yet it does not amount to much. If they are counseled properly against such fallacies, they will generally desist at once. Medical men should inform them candidly and forcibly that such an act is murder at any stage of pregnancy. I am thoroughly convinced with Dr. Storer, of Boston (Prize Essay), "that the employment, in the married relation, of any means whatever, for preventing conception, is but little else than legalized prostitution. Let no physician who claims or expects to claim, respect from God or his fellow-men, be either directly or by advice, party to such an atrocity. And let every member of the profession who has already acted, or will in future act, upon these suggestions, constitute himself a vigilance committee, to bring to justice and condign punishment any and every medical man in his community who degrades himself to such an office. Let us all refuse to subscribe for and receive at our firesides, newspapers, secular or religious, in whose columns, appear advertisements of patent nostrums for "removing all irregularities, from whatever cause produced." "The proprietors would advise against women, who are in a certain condition, taking the medicine, etc., as miscarriage would occur, although, even then, there would be no danger." Much has been said, and well said, by the editor of the *Medical and Surgical Reporter*, Philadelphia, against the evils I have

been trying to portray. This journal, an excellent one, should have our warmest commendation for its outspoken fearlessness in condemning this business. Our Western journals should also sound the alarm. Dr. Houghton, in an Obstetric report made before the Wayne County Medical Society, during the year, speaks out also in words of bold rebuke. Let every conscientious physician speak out, and every medical journal in the land, chronicle the evil. Thus can our profession come to the rescue, and signally co-operate with all other agencies of our holy Christianity in saving society from imminent impending physical, moral, and spiritual ruin.

NOTE.—Criminal prosecutions for abortions procured upon unmarried females for concealing shame, murder of the new born infant, by neglect or otherwise, for the same purposes, etc., must all cease, unless abortions among married women for convenience can be brought to an end. I can see no propriety in continuing any jurisprudence over the subject at all, unless the community is relieved of the demoralizing effects of this crime; it would soon be difficult to find a jury that would convict even in the clearest case."

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*Mott Memorial Library.*—Mrs. Mott has made a noble contribution to the profession of New York, at the same time that she has erected a perpetual monument to the memory of her husband, the late distinguished VALENTINE MOTT. We take the following account from the *Philadelphia Reporter*:

What the late Professor Mutter did for Philadelphia, the widow of the late Professor Valentine Mott has done for New York. At an expense of more than \$30,000, she has purchased, enlarged, and fitted up, at No. 58, Madison Avenue, between 27th and 28th streets, a building, in which are deposited the medical library, and the surgical instruments of her late husband, the distinguished American surgeon, Valentine Mott.—*Cincinnati Lancet and Observer*.

*Mercurial Collodion in the Removal of Syphilitic Patches of Discoloration.*—M. Leclerc states in the *Presse Medicale*



*Belge*, that a patient of his having tried alkaline, vapor, and sea-baths for the removal of those patches which appear on the skin of syphilitic patients, without effect, he recommended her to apply the following lotion, which removed them in a few days: Corrosive sublimate, fifty centigrammes; collodion fifteen grammes.—*Richmond Med. Jour.*

*To the Editor of the New York Medical Journal:*

DEAR SIR,—In the second edition of my work on the Principles and Practice of Medicine, I have inadvertently committed an error admitting of an inference which I beg permission through your columns to forestall. Giving some account of cholera in this city during the past summer, I have said as follows: "In New York, in anticipation of an epidemic visitation, the administration of affairs relating to public health was vested in four Commissioners, three of whom are distinguished members of the medical profession." (Page 473.)

It is an error of omission not to have stated that these four Commissioners acted in conjunction with the Police Commissioners and the Quarantine Physician; and inasmuch as there are four medical members in the Board, my language admits of the construction that only three of the four are distinguished members of the medical profession. To disclaim such a construction is the purpose of my asking you to insert this note. The quotation was penned under an impression, at the moment, that there were but three medical members in the Board. It is now too late to make the correction in the work, and I am therefore anxious, in justice to myself, to state that I had no intention of saying otherwise than that *all* the physicians in the Board of Commissioners are distinguished members of the medical profession.

With much respect, very truly yours,

AUSTIN FLINT.

[*New York Med. Jour.*]

*The General Hospitals of Paris.*—These are eight in number, and as a mean, deduced from the experience of eight years (1855-'63), furnished the following statistics: Hôtel-Dieu, 796 beds, with mortality of 10.54 per cent.; Pitié, 594 beds, mortality 11.91; Charité, 480 beds, mortality 9.59; St. Antoine, 330 beds, mortality 10.39; Necker, 346 beds, mortality 11.02; Cochin, 116 beds, mortality 9.85; Beaujon, 330 beds, mortality 11.13; Lariboisière, 617 beds, mortality 11.70.—*New York Med. Jour.*

*M. Velpeau and M. Jules Guérin.*—Both of these surgeons are members of the Academy of Medicine of Paris; the former, however, as every one knows, is professor at the Faculty, whilst the latter is unconnected with official teaching. For the last thirty years a somewhat bitter warfare has occasionally been carried on between these two eminent men, and one of the fiercest disputes is going on at the present time before the Academy.

M. Jules Guérin maintains, both in his speeches and in the *Gazette Médicale de Paris*, of which he is the able editor, that he is the *inventor* of subcutaneous surgery; and M. Velpeau, though allowing his opponent some share in the merit of having extensively applied subcutaneous sections, refuses, year after year, to admit the claim. It so happens that both belligerents are gifted with great elocutionary powers, that both are extensively read, and that both are wonderfully persevering and unyielding.

Those interested in subcutaneous surgery will find a mass of valuable information in the speeches recently delivered; and will, perhaps, remain convinced that, in the face of Stromeyer's and Schönbein's labors, the claim of discovery can hardly be defended. They will at the same time allow that great credit is due to M. Guérin for his valuable orthopædic labors. Not the least of the results obtained by the latter surgeon is the healing of large wounds by first intention, through pneumatic occlusion.

At the bottom of the debate lies the fact that M. Velpeau represents the scholastic interest, the pride of the faculty, and the professional dignity, against the really talented doings of an independent surgeon, unconnected with official position. The late M. Amussat, whose name is well known in the surgical world, succeeded, like M. Guérin, in becoming an eminent operator without attaining hospital or university distinction. These cases, however, are rare; for it requires an unusual amount of skill, perseverance and surgical tact to triumph over the difficulties besetting private practice. M. Guérin is a specialist; he has done good service in his orthopædic establishment. Like Behrend, of Berlin, too, he is not slow in publishing his success, and is ever ready to fight hard battles in order to uphold his well earned reputation.—*Ibid.*

*French Jurisprudence.*—Duke Caderousse-Gramont died a short time ago of phthisis, leaving the bulk of his large fortune to his physician, Dr. Déclat. The Duke's prodigality

had been so notorious that the family had interfered a few years ago and obtained some control over the property. Piqued at these proceedings, the deceased had intended, by his will, to frustrate the rightful heirs. The latter attacked the will, and easily had it declared null and void, as by the French law, the medical man in attendance on a testator cannot be made heir to the latter.—*Ibid.*

*Paris Faculty of Medicine.*—This body, it is said, is likely soon to undergo considerable change in its *personnel*, and not before this is required, if it be true, as stated, that no less than seven professors are incapacitated by age or illness, not to mention M. Trosseau's imminent resignation. The chair of clinical surgery lately held by M. Jobert (de Lambelle), now hopelessly insane, is to be immediately filled.—*Ibid.*

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# ATLANTA Medical and Surgical Journal.

NEW SERIES.

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No. 12.

## ORIGINAL COMMUNICATIONS.

### ARTICLE I.

*Pulmonary Apoplexy—Consequent on Ulceration of the  
“Os and-cervix uteri.”* By E. F. KNOTT, M. D., of At-  
lanta, Ga.

On the 5th of September, 1866, I was called to see Adeline, a mulatto, aged 17. I found her laboring under the following symptoms: A profuse flow of bloody, frothy serum, from the mouth and nose; dullness over the entire surface of the right lung, with some dullness over the left lung; complains of violent pain in the hypochondriac regions; great oppression about the precordia, with more or less pain seated in the supraorbital regions; pulse full, with evidence of local determination; repeated convulsions; the patient, during these convulsive attacks, resting on the heels and occiput, while, at the same time, she would grasp with her hands the integument over the precordiac, with such firmness and tenacity as to render it exceedingly difficult to remove them. Venesection, to the amount of twenty-four ounces, counter-irritation, over the chest and along the spine, followed by plumbi acetas et opii every three hours.

Sept. 6th.—Symptoms about the same; hemorrhage persisting. The bowels having been constipated for several days, ordered ol. ricini  $f\frac{3}{4}$  i., terebinthina  $f\frac{3}{4}$  i.

Sept. 7th.—Medicine has acted freely. Hemorrhage still continues, but less freely. Ordered the plumbi acetas and opii continued as before. At my visit in the afternoon found no alteration in the patient's condition. Treatment continued.

Sept. 8th.—Hemorrhage continues. No abatement of the other symptoms. Ordered comp. cathartic pills (U. S. P.), one every hour until they operate. Saw the patient again in the afternoon. The pills not acting, ordered olei ricini f 3 i., S. ft. hūstis.

Sept. 9th.—Medicine has acted freely. But little alteration in the symptoms. Ordered turpentine emulsion. Evening visit: finding evidences of local determination more prominent, practiced venesection to the amount of sixteen ounces.

Sept. 10th.—But slight amelioration of symptoms. Cupped freely, over the chest, and along the whole extent of the spine. After this, applied sinapism from sacrum to nape of neck, with a view of overcoming the spasmodic attacks, which have been persistent during her illness.

Sept. 11th.—Found the patient in the following condition: Resting on her back, inferior extremities extended, jaws firmly locked, so much so as to resist all force employed to separate them, short of doing violence to the parts concerned. Patient perfectly conscious of all that occurs about her. It being impracticable to administer anything by the mouth, ordered ol. ricini f 3 ii., ol. terebinth f 3 ii., tepid water f 3 xvi., one half to be used as an enema, to be followed in the course of two hours by the other half, provided the first does not move the bowels. Counter irritation to the spine and chest to be kept up.

Sept. 12th.—Condition of the patient the same. Requested my son, Dr. J. J. Knott to see the case with me. He suggested the probability of some organic affection of the womb. A vaginal examination, *per speculi*, revealed ulceration of the "os and cervix uteri." Cauterized the parts with caustic, and ordered bromide potassium 3 v., ext. lactuæ 3 i.,

aqua f $\frac{3}{4}$  xvi., fiat sol. Half of this was administered per rectum. About two o'clock in the afternoon, the other half was administered in the same manner. Saw the patient again, at 9 o'clock, P. M., of same day: found decided improvement of all the symptoms; entire absence of all tetanic symptoms. Hemorrhage very slight.

Sept. 13th.—Found the patient comfortable. Ordered bromide potassium 3 ii., ext. lactinæ 3 ii., aqua pura f $\frac{3}{4}$  ii., ft. sol., S., teaspoonful every other hour.

Sept. 14th.—Patient still improving. Treatment continued.

Sept. 15th.—Patient convalescent. Bromide potassium continued at intervals of six hours.

Sept. 16th.—Patient dismissed, with orders to continue the medicine as last directed.

**REMARKS.**—Up to the present time the patient has remained well, not having had an attack since.

Some twelve months previous to the patient's last illness she had been confined with her first child. Some three or four days after her confinement, she was attacked with puerperal fever, which confined her to her bed for three months. After getting up from this attack, she experienced frequent slight attacks of hemoptysis, though they were not of sufficient import, as she thought, to call in medical aid. These attacks, though, were not complicated with any spasmodic symptoms. During this time she was irregular in her catamenia, which irregularity, together with her other affection, must have depended upon the organic lesion of the womb, as all the symptoms yielded readily to the local and general treatment adopted in the latter stage of her illness.

The foregoing detail is given in consideration of the peculiarity of the case, and in view of still further illustrating the effect following the use of bromide of potassium, when employed in cases where the womb may be regarded as the seat of the disease. The query here presents itself to my

mind, Why may not this remedy be successfully employed in the treatment of tetanus? We know it to be a powerful nervous sedative.

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## ARTICLE II.

*The Nourishment of Children.*—By WM. HENRY CUMMING, M. D., with remarks by J. M. JOHNSON, M. D.

There is no subject that commends itself more strongly to our attention than the one that heads this article. When we reflect that health, constitution and life, are dependent upon nutrition, and that most infantile diseases are, *one way and another*, the result of improper food, the question is doubly enhanced, and challenges the most earnest attention at the hands of the medical profession at large. Nor will it do to be informed upon this subject ourselves alone: we must impart it to all the mothers of the land, and not only teach it to them once, but continue to teach it to them every day of our lives, when opportunity offers, until the laws of development and growth are better understood and acted upon than they are at present. Look at your statistical tables, and see the fearful inroads upon infantile life, not only in the great cities, where bad ventilation, poor food, and criminal dissipation and neglect cuts them off, but in the rural districts and small villages also, where, in the main, there is an exemption from destitution and the vices that poison the morals no less than the constitution. The readiness with which the young constitution responds to remedies, and urges on the process of repair, gives an earnest of what ought to be the result where the laws of nutrition are properly understood and carried out.

To make bone and teeth, and develop a good physical constitution, capable of resisting the ordinary tendencies of disease, it seems to us is within the scope of reasonable probability, even under the disadvantage of artificial means. We believe there is a criminal neglect that cries loudly against us, and which, as Christians, and conservators of health and life, we dare not longer indulge. The summer complaint in this country, the watery gripes of England, and like diseases all over the world, could, in our opinion, be greatly mitigated, and fatal results generally prevented, by a proper attention to the nutritive functions, and the food out of which the nutrient products are to be organized.

Newly born children should not be washed in soap and water, turning them over and over for this purpose, and then dressed in a fancy suit, including a shirt, two or three petticoats, a frock and apron, etc. On the contrary, they should be wiped gently with a soft rag wrung out of warm water; and if the child is delicate, a little spirit may be added, which will stimulate the skin and improve the circulation. It should then be starched behind the ears, around the neck, armpits, groin, genitals, and nates; after which, if the weather is cold, it should be wrapped in a sort of mantle, or blouse, made of Canton flannel, and placed in bed beside its mother, not with its head on a pillow, but so adjusted its wrapper as to let its head rest a shade lower than its body. The reason for this is obvious: for six months the new comer has been standing on its head, and a sudden revolution in this respect may be very hurtful, if not fatal, to him; and for the first month, whenever he is taken up, he should be held by the feet, and let the blood gravitate freely to his head for an instant. If this is done, children will rarely die of trismus nescientium. As soon as the mother has sufficiently recovered from her exhaustion to do so safely, the child should be put to the breast. If there is milk enough for it at the start, which is often the case, it is well. One pint of its mother's milk per day will suffice, until it is eight or ten days old. If the mother has no milk,



then a wet nurse, whose milk is not more than four or five months old, will answer. But, if the child is left motherless, or she is in any way incapacitated to nourish it, and a wet nurse of good health, and otherwise acceptable, cannot be procured, then artificial milk must be resorted to. We commend the following, originally published in the *American Journal of Medical Sciences*, for July 1858, from the pen of Wm. Henry Cumming, M. D., formerly of Georgia, now of Toronto, Canada West. Dr. Cumming's commanding ability and educational qualifications fit him, in an eminent degree, for the investigation of this subject, one of the most important, in our opinion, connected with the subject of medicine. The physician has but half done his duty when he cures disease: the other half, and, perhaps, the greatest of the two, is to prevent it. The labors of Dr. C. are the more praiseworthy, because they are addressed to that helpless period of human life, usually left to chance, ignorance, and superstition.

*Normal Lactation of the Human Race.*—In vigorous women the secretion of milk is copious. And this large amount is indicated in the unimpregnated state by the great development of the mammary glands. In no animal with which we are acquainted, is there a larger promise in this respect. The amount ordinarily furnished by a good nurse is from one and a half to two quarts daily, or from four to five pounds. But cases often occur in which two children receive abundant supplies from one mother, involving a secretion of eight pounds at least. An infant three months old will take from forty-eight to sixty-four fluid ounces daily, in six or eight half pint doses. During the first year, therefore, he will take from 1000 to 1300 lbs.

What is the composition of this milk? Without entering into long and tedious details, it may be simply said that by the latest and apparently the most exact analysis, its composition is:—

Butter 20.76	1000 lbs.	Butter 20.76 lbs.	1800 lbs.	Butter 27 lbs.
Casein 14.84	therefore	Casein 14.84 "	therefore	Casein 18 3/4 "
Sugar 75.02	contain	Sugar 75.02 "	contain	Sugar 97 3/4 "
Water 899.88		Water 899.88 "		Water 1157 "

In 1000 lbs. of milk there are 1.6238 lb. of salts, or 26 ounces, of which 0.5736 lb., or 9 ounces, are phosphate of lime.

In 1,300 lbs. of milk the salts amount to 2.1 lbs., or 33½ ounces, of which 12 ounces are phosphate of lime.

It thus appears that, during the first year, the child receives from 110 to 143 pounds of dry solids. He may thus readily gain 15 or 20 pounds in weight (implying less than three pounds of dry solids), and yet have a large residue, from 107 to 140 pounds, to be expended in the production of heat and in the activity of an energetic vitality. A child thus nourished, can make teeth and bone without difficulty; his functional activity need never be suspended for want of material; atmospheric changes may be successfully resisted, and zymotic diseases will have little power.

\* \* \* \* \*

The cases in which natural lactation fails are so numerous as to excite the deepest concern. Human milk can seldom be obtained, and none of the usually employed substitutes ordinarily succeed. Is it then too much to hope that physicians will give serious attention and thoughtful consideration to a plan offering a substitute for human milk scientifically correct and practically successful?

From what has been said of the adaptation of milk by its peculiar and admirable constitution to the wants of the young animal, it follows, of necessity, that nothing but milk can be proposed as a substitute for the natural food. The only kind that in this country can be readily and certainly obtained, is that of the cow. But the various kinds of milk are not identical in composition, being adapted to the different degrees of development at birth of the young. The ruminants are the most advanced in this respect, the human infant is far behind. It cannot then be supposed that milk adapted to the stomach of a calf would suit that of a newborn child. Common observation agrees with chemical analysis in declaring that there is too much casein in the milk of the cow to be tolerated by the child. This is a well-known fact, and every one waters the milk. But "how much water must be used?" and "will watering do no harm?" are questions to be answered only by careful study of the milk, and close observation of its effects upon the child.

Cow's milk, contains	Butter .....	33.59	While human milk contains	Butter .....	30.76
	Casein .....	40.75		Casein .....	14.24
	Sugar .....	58.87		Sugar .....	75.09
	Water .....	666.69		Water .....	669.66

Cow's milk, therefore, contains nearly three times as much casein as human milk, but less than twice as much butter. In cow's milk the butter is to the casein as 100 to 105; in

human milk, as 100 to 70. If then, by dilution, we reduce the butter to 20.76, we shall have 21.92 of casein, or 50 per cent. more than in human milk. With such an excess of casein we cannot hope to succeed. The stomach of the child cannot digest it, and it will thus pass through the intestinal canal, irritating as it goes. Debilitating diarrhoea and, perhaps, vomiting will occur, and the attempt fail. This is the usual experience of those who use cow's milk for infants, and often leads to the abandonment of milk and the substitution of farinaceous food.\*

If, by a further dilution, we reduce the casein to 14.34, we have only 13.58 of butter, or less than two-thirds of the proper proportion. Such milk may, for a season, seem to suit the child, but before long it will be found that he does not thrive. The reason is plain. The right proportion of butter is 20.76; this warms a child, and supplies nervous energy. But by withholding one-third you lower the temperature of the body, and deprive the nervous system of one-third of the special nerve-food, the indispensable lecithin. What wonder, then, that in a short time pallor and languor supervene, and the health evidently declines. Continue this food, and there is one result—starvation. Restore the full supply of butter, and, if matters have not gone too far for recovery, warmth and energy will gradually return, the downward progress be stayed, and vigor replace debility.

It is thus evident that by no mode of dilution can ordinary cow's milk be made a substitute for human. There

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\* The food of infants should be all absorbed. During the fetal state, the food of the body is obtained by endosmosis from the mother's blood. During the period of lactation, it comes from the mother's milk. In this milk there is no refuse matter: all is absorbed and passes into the circulation. No portion of the milk passes from the stomach, through the intestinal canal, to the rectum. The feces of infants are the excretions of the intestinal canal and its various glandular appendages. The lower part of the canal may thus be considered as the excreting duct of the liver, pancreas, and the glands of the mucous surface.

What wonder, then, that this duct should be irritated by the presence of foreign bodies (lumps of curd, starch granules, etc., etc.) and that this irritation should continue so long as these foreign bodies remain in contact with its surface?

No fact is more interesting and important than this, that persistent diarrhoea often ceases at once when suitable food is given. By suitable food we mean food that is all absorbed. Three or four hours after the first dose of such food, the diarrhoea ceases entirely.

Bearing this truth in mind, let us never expect health so long as foreign substances are found in the feces of infants. Even small and smooth particles of curd produce great irritation, and, in many cases, the ingestion of such food produces almost immediately a discharge of mucus holding in suspension these offending substances.

will be, in every case an excess of casein, or a deficiency of butter. So long as the butter is to the casein as 100 to 105, instead of as 100 to 70, so long must dilution fail to adapt it to the wants of the child. But if this original proportion could be changed to that existing in human milk, we might have hope of success. And we proceed to show how this may be done.

If we leave at rest for four or five hours ordinary cow's milk, and then remove and examine the upper third, we find in it 50 per cent. more butter than it at first contained. In round numbers, its butter is no longer to its casein as 100 to 105, but as 150 to 105, or as 100 to 70. If then, by dilution of this milk, we reduce the butter to 20.76, we have 14.34 of casein, as in human milk.

Another, and, in some respects, a better mode of obtaining the same result is by using the latter half of the milk furnished by the cow. The former half contains 22.18 of butter to 41.63 of casein, while the latter half has 54 of butter to 38 of casein. Here, again, the right proportion exists, and, by proper dilution, may be made most accurately to resemble in its chemical constitution human milk.

To show the accuracy of this imitation, let us prepare some of this milk by the addition of sugar and water. Its actual composition is butter 54, casein 38, sugar 53, and water 855. By adding sugar 142 and water 1458, we have butter 54, casein 38, sugar 185, and water 2313. Reducing this to thousandths (that we may compare it with the composition of human milk, as previously given), we have butter 30.77, casein 14.61, sugar 75, and water 889.62. The difference is unworthy of notice.

Not only may ordinary human milk be thus closely imitated, but the colostrum also. To do this, during the first month of the child's life, we must use milk containing from 75 to 80 thousandths of butter, or from 94 to 107 per cent. more than the ordinary milk of the cow. This exceedingly rich milk may be obtained by taking the upper *eighth* instead of the upper *third* of milk left to repose for four or five hours. It may also be obtained by using the last *tenth* of the milk furnished by the cow. In the following schedule the milk of the first month is of this peculiarly oily kind.

It will be seen from this schedule, that, by the gradual diminution of water, an attempt is made (in imitation of the natural process) to adapt the food to the growing energy of the child. It will, of course, be understood by every practitioner that, in this schedule, age is used to indicate

development. Some children are two or three months behind their age, and must be fed accordingly. In general, it is better to begin with the milk more diluted than the age and development would seem to indicate, and then gradually increase its strength. It is better that the food should be insufficient than that it should be indigestible.

### SCHEDULE.

For a Child from From Ordinary Take Top Milk.			Cow's Milk.		Add Water.	Making Food.
2	to 10	days old,	1½ quarts,	1½ gills,	3½ gills,	4½ gills.
10	to 20	"	1½ "	1½ "	4½ "	5 "
20	to 30	"	2 "	2½ "	6 "	8½ "
1	to 1½	months,	1½ "	8 "	6½ "	9½ "
1½	to 2	"	1½ "	8½ "	7 "	10½ "
2	to 2½	"	1½ "	4 "	7½ "	12½ "
2½	to 3	"	1½ "	4½ "	7½ "	13 "
3	to 3½	"	1½ "	5 "	7½ "	13½ "
3½	to 4	"	2½ "	5½ "	7½ "	14 "
4	to 4½	"	2½ "	6 "	7½ "	14½ "
4½	to 5	"	2½ "	6½ "	7½ "	15 "
5	to 6	"	2½ "	7 "	7½ "	15½ "
6	to 7	"	2½ "	7½ "	6½ "	16 "
7	to 8	"	3 "	8 "	6½ "	16½ "
8	to 9	"	—	8½ "	6 "	17 "
9	to 10	"	—	8½ "	6 "	17½ "
10	to 11	"	—	8½ "	6 "	18 "
11	to 12	"	—	9 "	5½ "	18½ "
12	to 13	"	—	9 "	5½ "	19 "
13	to 14	"	—	9½ "	5 "	19½ "
14	to 15	"	—	10 "	5 "	20 "
15	to 16	"	—	10 "	5 "	20½ "
16	to 17	"	—	10 "	5 "	21 "
17	to 18	"	—	10 "	5 "	21½ "
18	to 19	"	—	10 "	5 "	22 "
19	to 20	"	—	10 "	5 "	22½ "
20	to 21	"	—	10 "	5 "	23 "
21	to 22	"	—	10 "	5 "	23½ "
22	to 23	"	—	10 "	5 "	24 "
23	to 24	"	—	10 "	5 "	24½ "
24	to 25	"	—	10 "	5 "	25 "
25	to 26	"	—	10 "	5 "	25½ "
26	to 27	"	—	10 "	5 "	26 "
27	to 28	"	—	10 "	5 "	26½ "
28	to 29	"	—	10 "	5 "	27 "
29	to 30	"	—	10 "	5 "	27½ "
30	to 31	"	—	10 "	5 "	28 "
31	to 32	"	—	10 "	5 "	28½ "
32	to 33	"	—	10 "	5 "	29 "
33	to 34	"	—	10 "	5 "	29½ "
34	to 35	"	—	10 "	5 "	30 "
35	to 36	"	—	10 "	5 "	30½ "
36	to 37	"	—	10 "	5 "	31 "
37	to 38	"	—	10 "	5 "	31½ "
38	to 39	"	—	10 "	5 "	32 "
39	to 40	"	—	10 "	5 "	32½ "
40	to 41	"	—	10 "	5 "	33 "
41	to 42	"	—	10 "	5 "	33½ "
42	to 43	"	—	10 "	5 "	34 "
43	to 44	"	—	10 "	5 "	34½ "
44	to 45	"	—	10 "	5 "	35 "
45	to 46	"	—	10 "	5 "	35½ "
46	to 47	"	—	10 "	5 "	36 "
47	to 48	"	—	10 "	5 "	36½ "
48	to 49	"	—	10 "	5 "	37 "
49	to 50	"	—	10 "	5 "	37½ "
50	to 51	"	—	10 "	5 "	38 "
51	to 52	"	—	10 "	5 "	38½ "
52	to 53	"	—	10 "	5 "	39 "
53	to 54	"	—	10 "	5 "	39½ "
54	to 55	"	—	10 "	5 "	40 "
55	to 56	"	—	10 "	5 "	40½ "
56	to 57	"	—	10 "	5 "	41 "
57	to 58	"	—	10 "	5 "	41½ "
58	to 59	"	—	10 "	5 "	42 "
59	to 60	"	—	10 "	5 "	42½ "
60	to 61	"	—	10 "	5 "	43 "
61	to 62	"	—	10 "	5 "	43½ "
62	to 63	"	—	10 "	5 "	44 "
63	to 64	"	—	10 "	5 "	44½ "
64	to 65	"	—	10 "	5 "	45 "
65	to 66	"	—	10 "	5 "	45½ "
66	to 67	"	—	10 "	5 "	46 "
67	to 68	"	—	10 "	5 "	46½ "
68	to 69	"	—	10 "	5 "	47 "
69	to 70	"	—	10 "	5 "	47½ "
70	to 71	"	—	10 "	5 "	48 "
71	to 72	"	—	10 "	5 "	48½ "
72	to 73	"	—	10 "	5 "	49 "
73	to 74	"	—	10 "	5 "	49½ "
74	to 75	"	—	10 "	5 "	50 "
75	to 76	"	—	10 "	5 "	50½ "
76	to 77	"	—	10 "	5 "	51 "
77	to 78	"	—	10 "	5 "	51½ "
78	to 79	"	—	10 "	5 "	52 "
79	to 80	"	—	10 "	5 "	52½ "
80	to 81	"	—	10 "	5 "	53 "
81	to 82	"	—	10 "	5 "	53½ "
82	to 83	"	—	10 "	5 "	54 "
83	to 84	"	—	10 "	5 "	54½ "
84	to 85	"	—	10 "	5 "	55 "
85	to 86	"	—	10 "	5 "	55½ "
86	to 87	"	—	10 "	5 "	56 "
87	to 88	"	—	10 "	5 "	56½ "
88	to 89	"	—	10 "	5 "	57 "
89	to 90	"	—	10 "	5 "	57½ "
90	to 91	"	—	10 "	5 "	58 "
91	to 92	"	—	10 "	5 "	58½ "
92	to 93	"	—	10 "	5 "	59 "
93	to 94	"	—	10 "	5 "	59½ "
94	to 95	"	—	10 "	5 "	60 "
95	to 96	"	—	10 "	5 "	60½ "
96	to 97	"	—	10 "	5 "	61 "
97	to 98	"	—	10 "	5 "	61½ "
98	to 99	"	—	10 "	5 "	62 "
99	to 100	"	—	10 "	5 "	62½ "
100	to 101	"	—	10 "	5 "	63 "
101	to 102	"	—	10 "	5 "	63½ "
102	to 103	"	—	10 "	5 "	64 "
103	to 104	"	—	10 "	5 "	64½ "
104	to 105	"	—	10 "	5 "	65 "
105	to 106	"	—	10 "	5 "	65½ "
106	to 107	"	—	10 "	5 "	66 "
107	to 108	"	—	10 "	5 "	66½ "
108	to 109	"	—	10 "	5 "	67 "
109	to 110	"	—	10 "	5 "	67½ "
110	to 111	"	—	10 "	5 "	68 "
111	to 112	"	—	10 "	5 "	68½ "
112	to 113	"	—	10 "	5 "	69 "
113	to 114	"	—	10 "	5 "	69½ "
114	to 115	"	—	10 "	5 "	70 "
115	to 116	"	—	10 "	5 "	70½ "
116	to 117	"	—	10 "	5 "	71 "
117	to 118	"	—	10 "	5 "	71½ "
118	to 119	"	—	10 "	5 "	72 "
119	to 120	"	—	10 "	5 "	72½ "
120	to 121	"	—	10 "	5 "	73 "
121	to 122	"	—	10 "	5 "	73½ "
122	to 123	"	—	10 "	5 "	74 "
123	to 124	"	—	10 "	5 "	74½ "
124	to 125	"	—	10 "	5 "	75 "
125	to 126	"	—	10 "	5 "	75½ "
126	to 127	"	—	10 "	5 "	76 "
127	to 128	"	—	10 "	5 "	76½ "
128	to 129	"	—	10 "	5 "	77 "
129	to 130	"	—	10 "	5 "	77½ "
130	to 131	"	—	10 "	5 "	78 "
131	to 132	"	—	10 "	5 "	78½ "
132	to 133	"	—	10 "	5 "	79 "
133	to 134	"	—	10 "	5 "	79½ "
134	to 135	"	—	10 "	5 "	80 "
135	to 136	"	—	10 "	5 "	80½ "
136	to 137	"	—	10 "	5 "	81 "
137	to 138	"	—	10 "	5 "	81½ "
138	to 139	"	—	10 "	5 "	82 "
139	to 140	"	—	10 "	5 "	82½ "
140	to 141	"	—	10 "	5 "	83 "
141	to 142	"	—	10 "	5 "	83½ "
142	to 143	"	—	10 "	5 "	84 "
143	to 144	"	—	10 "	5 "	84½ "
144	to 145	"	—	10 "	5 "	85 "
145	to 146	"	—	10 "	5 "	85½ "
146	to 147	"	—	10 "	5 "	86 "
147	to 148	"	—	10 "	5 "	86½ "
148	to 149	"	—	10 "	5 "	87 "
149	to 150	"	—	10 "	5 "	87½ "
150	to 151	"	—	10 "	5 "	88 "
151	to 152	"	—	10 "	5 "	88½ "
152	to 153	"	—	10 "	5 "	89 "
153	to 154	"	—	10 "	5 "	89½ "
154	to 155	"	—	10 "	5 "	90 "
155	to 156	"	—	10 "	5 "	90½ "
156	to 157	"	—	10 "	5 "	91 "
157	to 158	"	—	10 "	5 "	91½ "
158	to 159	"	—	10 "	5 "	92 "
159	to 160	"	—	10 "	5 "	92½ "
160	to 161	"	—	10 "	5 "	93 "
161	to 162	"	—	10 "	5 "	93½ "
162	to 163	"	—	10 "	5 "	94 "
163	to 164	"	—	10 "	5 "	94½ "
164	to 165	"	—	10 "	5 "	95 "
165	to 166	"	—	10 "	5 "	95½ "
166	to 167	"	—	10 "	5 "	96 "
167	to 168	"	—	10 "	5 "	96½ "
168	to 169	"	—	10 "	5 "	97 "
169	to 170	"	—	10 "	5 "	97½ "
170	to 171	"	—	10 "	5 "	98 "
171	to 172	"	—	10 "	5 "	98½ "
172	to 173	"	—	10 "	5 "	99 "
173	to 174	"	—	10 "	5 "	99½ "
174	to 175	"	—	10 "	5 "	100 "
175	to 176	"	—	10 "	5 "	100½ "
176	to 177	"	—	10 "	5 "	101 "
177	to 178	"	—	10 "	5 "	101½ "
178	to 179	"	—	10 "	5 "	102 "
179	to 180	"	—	10 "	5 "	102½ "
180	to 181	"	—	10 "	5 "	103 "
181	to 182	"	—	10 "	5 "	103½ "
182	to 183	"	—	10 "	5 "	104 "
183	to 184	"	—	10 "	5 "	104½ "
184	to 185	"	—	10 "	5 "	105 "
185	to 186	"	—	10 "	5 "	105½ "
186	to 187	"	—	10 "	5 "	106 "
187	to 188	"	—	10 "	5 "	106½ "
188	to 189	"	—	10 "	5 "	107 "
189	to 190	"	—	10 "	5 "	107½ "
190	to 191	"	—	10 "	5 "	108 "
191	to 192	"	—	10 "	5 "	108½ "
192	to 193	"	—	10 "	5 "	109 "
193	to 194	"	—	10 "	5 "	109½ "
194	to 195	"	—	10 "	5 "	110 "
195	to 196	"	—	10 "	5 "	110½ "
196	to 197	"	—	10 "	5 "	111 "
197	to 198	"	—	10 "	5 "	111½ "
198	to 199	"	—	10 "	5 "	112 "
199	to 200	"	—	10 "	5 "	112½ "
200	to 201	"	—	10 "	5 "	113 "
201	to 202	"	—	10 "	5 "	113½ "
202	to 203	"	—	10 "	5 "	114 "
203	to 204	"	—	10 "	5 "	114½ "
204	to 205	"	—	10 "	5 "	115 "
205	to 206	"	—	10 "	5 "	115½ "
206	to 207	"	—	10 "	5 "	116 "
207	to 208	"	—	10 "	5 "	116½ "
208	to 209	"	—	10 "	5 "	117 "
209	to 210	"	—	10 "	5 "	117½ "
210	to 211	"	—	10 "	5 "	118 "
211	to 212	"	—	10 "	5 "	118½ "
212	to 213	"	—	10 "	5 "	119 "
213	to 214	"	—	10 "	5 "	119½ "
214	to 215	"	—	10 "	5 "	120 "
215	to 216	"	—	10 "	5 "	120½ "
216	to 217	"	—	10 "	5 "	121 "
217	to 218	"	—	10 "	5 "	121½ "
218	to 219	"	—	10 "	5 "	122 "
219	to 220	"	—	10 "	5 "	122½ "
220	to 221	"	—	10 "	5 "	123 "
221	to 222	"	—	10 "	5 "	123½ "
222	to 223	"	—	10 "	5 "	124 "
223	to 224	"	—	10 "	5 "	124½ "
224	to 225	"	—	10 "	5 "	125 "
225	to 226	"	—	10 "	5 "	125½ "
226	to 227	"	—	10 "	5 "	126 "
227	to 228					

Eight ordinary teaspoonfuls equal one gill; six equal three quarters of a gill; four equal half a gill; and two equal a quarter of a gill.

### BRIEF DIRECTIONS FOR FEEDING INFANTS.

The cow should be healthy, from four to ten years old.

Young milk is best for infants; a new milch cow is best.

When the milk is four or five months old, younger milk should be sought;—it is much better for the child.

The cow should be well fed on grass or hay. No grain, or meal, or slops, should be given to her. Grass or hay, water and salt, should be her only food.

She must not be exposed to cold. Well housed in winter.

The milk must stand four or five hours in a cool place.

The top milk should then be taken for the child.

It should then be mixed with cool water; this water should be soft and pure; hard water should be avoided.

White sugar should be used for sweetening it; it should be made a very little sweeter than ordinary cow's milk.

The child should be fed from a bottle.

The child should be fed once in three or four hours.

The milk, when prepared, should be kept in a cool place.

In warm weather it may be prepared twice a day.

Bottles, pans, etc., must be kept sweet and clean.

The milk should be given blood-warm.

The infant should take this food by suction. For this there are several reasons. 1st. It is the natural mode; 2d. We cannot otherwise administer the food at so uniform a temperature; 3d. We cannot otherwise secure a free flow of saliva; 4th. We may thus feed the child in the natural posture; the recumbent. There is less danger of regurgitation, and he sinks to sleep quietly after feeding, if the time for sleeping has come.

An eight ounce vial, with a quill rolled in a long strip of Swiss muslin for a stopper, is the best arrangement for cleanliness and convenience. Tubes having narrow passages cannot be readily cleansed.

A child ten days old will take about thirty-two ounces daily, in eight four ounce doses. The doses will increase in size and somewhat diminish in number, so that in three months seven eight ounce doses are usually taken. The milk should be given at regular intervals; the good effects of method and strict regularity in this matter are very apparent. The child should be early trained to pass six or eight hours at night without feeding. The temperature should be from 100 degrees to 104. The child should not be allowed to take the milk too rapidly; ten or fifteen minutes should be given to each dose. The stomach will not then be too much distended, the liquid part being quickly absorbed.

This food thus administered may well be styled *artificial human milk*. In chemical composition, it most closely resembles the natural secretion of mammary glands of vigorous, healthy women, and it offers to the child all that he needs for growth, development, warmth, and activity. A careful observation of its effects for several years has led to the conviction that it leaves nothing to be desired, and that, on this food, an infant may be reared with admirable results. And by this we mean that health, uninterrupted health, with vigor and energy of the bodily functions, may be regarded as the natural result of the use of this food. We mean that gastric and intestinal disorders do not follow its use, as they so often do that of the milk of mothers. We mean that under its use dentition will be ordinarily a painless process, and that the teeth will be strong and durable.

Believing that a large proportion of the sickness and death of infants is the result of insufficient and improper food, we feel sure that, by the use of this artificial milk, the health and lives of tens of thousands might be annually preserved. We believe that if generally used the influence upon the next generation would be evident in a visible increase of health and vigor. In our own household it has proved of priceless value, and we desire that other households may share the benefit.

WM. HENRY CUMMING, M. D.

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### ARTICLE III.

#### *Report of a Case of Intra-Uterine Polypus, with Operation.*

By W. F. WESTMORELAND, M. D., Professor of Surgery in the Atlanta Medical College.

We do not propose, in this article, to discuss the different varieties of uterine polypi, or the several operations that have been suggested for their removal, but simply to give the report of a case illustrating a simple, and to me, a new method of removing certain varieties of *intra-uterine* polypi. No one who has been called upon to treat a case of this most perplexing affection, in a patient exhausted to the last degree, by repeated hemorrhages, but will be interested in the suggestion of a more simple and less hazardous operation than has usually been adopted in the removal of this class of uterine out-growths.

On the 12th of September, 1866, I saw, with Drs. Shaffee and Talley, Mrs. K——, of Forsyth county, Georgia, who, for five or six months, had suffered from an exhausting uterine hemorrhage. I found a rather delicate lady, 34 years of age, who, for the past ten years, had suffered greatly from indigestion.

She informed me that she had had five children, the

youngest two years old ; never had any uterine trouble until since the birth of her last child. In March last, fifteen months after the birth of her last child, and about her usual time for the return of the menstrual flow after child-birth, she had her first hemorrhage, but as it was not profuse, she regarded it as nothing more than the return of the natural discharge. In a short time after the first, she had a second hemorrhage, more profuse ; since which time they had rapidly increased in frequency and quantity. At the time of my visit the hemorrhage was almost continuous, the patient confined to the bed, and exsanguinous to the last degree.

Sometime before my visit, the physicians in attendance had detected a tumor within the cervix uteri, and it was for the removal of this that my services were demanded.

Upon an examination per vagina, I had some difficulty in reaching the tumor, while the patient occupied the recumbent position ; but as soon as she was placed in the half-sitting posture, I had no difficulty in detecting the polypus, but found it would be impossible to introduce my finger in the uterus, as this organ would recede before the force necessary to pass the cervix. Feeling the necessity of the immediate removal of the polypus, and believing that the os uteri was sufficiently dilated to readily permit the introduction of the finger, if the uterus could be brought down and fixed, I inserted the mwseux hooks into the neck of the uterus, and brought it down to near the os externum. Giving the hooks to an assistant, I, without any great difficulty, passed my index finger into the cavity of the womb, and found, to my great perplexity, the polypus, which was about the size of a small hen's egg, attached to the fundus and anterior wall of the womb by a pedicle almost the circumference of the polypus itself—say an inch and a half long by three quarters of an inch thick. During the examination the hemorrhage was profuse, until the finger was introduced, which then acted as a tampon, completely arresting the flow, except



when from any undue motions of the finger, there would be an irregular dilation of the os with an escape of blood.

What next to do was the perplexing question. It was evident that something had to be done, and that, too, without delay, else our patient would inevitably perish from loss of blood. To attempt to ligate the pedicle, if such it could be called, through an os uteri so slightly dilated, and the cervix filled with the tumor, would have been extremely difficult, if not impossible.

Excision would have been surrounded with the same difficulties, with, perhaps, an increase of the dangers. Evulsion was impossible, with such a pedicle, as I made more than one effort without accomplishing more than having a gush of blood escaping by my finger at every effort.

The idea then suggested itself that I might sever the connection of the pedicle and walls of the uterus with the finger nail: so making tense the portion of the pedicle attached to the anterior wall of the uterus, by depressing the hand and thus forcing the tumor back, I commenced the saw motion with the nail, with firm pressure, and in less time than three minutes, was rejoiced to find that the tissue was giving way under my finger nail. In less time than ten minutes the polypus was completely detached, and without difficulty removed from the cavity of the womb.

After the removal of the tumor, the uterus contracted promptly, and all hemorrhage ceased, so that the tampon, which I fully expected to use, was not necessary. A stimulant and anydyne was now administered, and the patient made comfortable. There was no return of the hemorrhage; nor was the operation followed by any unpleasant symptoms.

The patient rapidly regained her strength, and in a few weeks was able to walk and ride at pleasure.

Six weeks after the removal of the tumor, she menstruated, but not profusely. The two subsequent periods were at the proper time; the discharge, however, was scant, but not attended with any unpleasant symptoms.

The polypus removed was lobulated, and composed of

cellular tissue, blood vessels and bundles of fibres, evidently belonging to that variety known as *cellular* polypus.

I do not believe that the pedicle of a true fibrous polypus could be severed in this way. For the removal, then, of this variety, I would suggest an instrument to consist of a thimble which is made to fit, accurately, the index finger, by means of a spring, and so constructed as to carry a concealed blade upon its internal surface, which blade, when the tip of the finger reaches the pedicle to be severed, may be projected by the operator, by means of a wire attached to the blade, and sufficiently long to pass through the os externum.

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#### ARTICLE IV.

*Medical Formulæ, with Remarks.* By D. W. HAMMOND, M.  
D., Macon, Ga.

Over the door of one of the most popular restaurants in the city of New York, we find inscribed upon a beautiful sign board the following:

*"Nunquam non Paratus,"*

Which sentiment has been adopted by one of our city druggists, and elegantly engraved on glass in front of the prescription desk. This is a very appropriate motto for every calling and profession. The practising physician, more particularly than all others, as he should *never be unprepared*, should be ready at all times, and in every emergency to conform to it. His business is to grapple day by day with disease and death. Every malady to which the animal organism is subject, is the object of the healing art, the purpose of which is their prevention, cure, or alleviation. The agents

which are used by the practitioner are almost entirely pharmaceutical. He should therefore be well versed in medical science and chemical knowledge; for without a thorough acquaintance with the *modus operandi* of remedial agents and chemical affinities, his formulæ would be, in many instances, incomplete, and instead of relieving his patient of the disease for which he prescribed, would complicate and aggravate it. From this view of the subject, I think every physician should have a note book, in which he should record every important case and the treatment. His prescriptions, when found beneficial, as well as those of his confreres, should be plainly and legibly written.

By pursuing this plan a few years, he will have collected a great number of valuable recipes, which he can readily turn to, and select one to suit many of the cases upon which he may be called on to prescribe. A physician who has a large and extensive practice is necessarily compelled to make "extemporaneous prescriptions," and in the hurry of the moment mistakes sometimes occur. But when he has a variety of well selected prescriptions, prepared by himself or others, recorded in a book kept for the purpose, if one is found suited to the case upon which he is consulted, it can be copied without any danger of committing an error. It is common in France, and the course pursued by Griffith, to write prescriptions in *words* instead of the usual pharmaceutical signs. I am of opinion, however, that mistakes are as apt to take place when the prescription is written, as when expressed by signs.

I, therefore, write all my prescriptions by the old abbreviated cabalistic terms.

To demonstrate the practical utility of keeping a recipe book, I will now give a case or two.

A patient presents himself for medical advice, stating that his "stomach is out of order;" complains of heartburn, acid eructations, vomiting occasionally after eating, and frequent paroxysms of sick headache, mouth slimy and rather dry, some pain in the small of the back, urine scant and

highly colored, bowels costive, etc. Turn to your note book, under the head of Dyspepsia, where you know you have the remedy to suit his case. Copy recipe No. 1, and direct him how it is to be taken. Another calls to consult you, stating that he has been subject to frequent recurring intermittents for nearly twelve months. He will tell you that his health, notwithstanding, is tolerable good, and that the chills are slight and short in duration, with slight fever and some headache, and pain in the loins after each paroxysm.

On examination, you will find his tongue foul, and his eyes slightly jaundiced.

This form of chronic chills is caused by a neuropathic condition of the system, and more properly denominated *nervous rigors*. The appropriate prescription in such case you will find under the head of "Chronic Chills," Nos. 2 and 3, and also the directions how to administer them.

#### DYSPEPSIA.

No. 1.      ℞ P<sup>r</sup>. Rhei,  
               Sup. Carb. Soda, ā ā 3 ii.  
               Carb. Potass . . . . . ʒ ii.  
               Aqua Camphora . . . 3 viii.—Mix.

Dose, a tablespoonful 15 minutes before eating.

If I were restricted to a single remedy in the treatment of this disease, I would prefer this to any other I have used, and for the following reasons: The soda, and also the potassa are both antacids. The former is eliminated through the salivary glands, and the latter through the kidneys. When the saliva is deficient, the gastric juice becomes acrid. The soda increases the salivary secretion, thereby dilutes it. In this way the acid is neutralized, and the irritation of the mucous membrane of the stomach is relieved. The kidneys being the emunctory through which the potassa is eliminated, are restored to their normal condition. The rhubarb is a sub-tonic and laxative, and prevents costiveness. The camphor water relieves gastrodinia, and expells the flatus which is

always in excess in dyspepsia. To be taken without shaking the vial.

CHRONIC CHILLS (OR FREQUENT RECURRING INTERMITTENTS).

- No. 2    ℞ Infusum Eupatorii Perfoliati..... ℥ vi.  
                     Tr. Valerian..... ℥ ii.  
                     Tr. Nux Vomice..... 3 ii  
                     Sulph. Quinine..... ℥ ii  
                     Acid Sulph. Aromat. Q. S. —M.

A tablespoonful three times a day. On the day of chill, three or four doses should be taken an hour apart, and the last dose one hour before the chill is expected to come on. When the patient is feeble and anemic, and troubled with neuralgic throbbings in the temples, Fowler's solution of arsenic (℥ i) should be added to the formula, and taken after meals.

- No. 3.    ℞ Comp. ext. Colocynth,  
                     Blue Mass ..... ā ā grs. 15  
                     Sulph Quinine..... grs. 25

Mix and make 24 pills. Two to be taken every two hours, the day after the chill. When the patient has a yellowness of the skin and eyes, with hepatic derangement, this is an invaluable remedy.

- No. 4.    ℞ Acid Arseniosi..... grs. iss.  
                     Quinine Sulph.  
                     Ferri. Sulph.    ā ā ..... 3 i.  
                     Sulph. Morphine..... grs. i.  
                     Ext. Nux Vomica..... ℥ i.    Gross.

M. ft. 30 pills.

Sig.—One to be taken every five or six hours. A good remedy when the patient is anemic, and troubled with neuralgic headache.

- No. 5.    ℞ Comp. Tr. Gentian..... ℥ iiij.  
                     Tr. Columbo  
                     Comp. Tr. Cardaman..... ā ā 3 ss.  
                     Strychnine ..... grs. i.  
                     Sulph. Morphine..... “ ii.—Mix.

A teaspoonful at bed-time, and 2 next day, preceding the chill. I have found the above to answer well in persons who could not take quinine.

#### OOSTIVENESS.

- No. 6.    Ext. Hyoscyamus..... 3 i.  
           Comp. Ext. Colocynth..... ʒ ij.  
           Ext. Nux Vomica..... grs. vi.

M. ft. Pill No. 24.

One taken every night generally gives a loose operation next morning. These pills are very mild in their action. The nux vomica appears to heighten the action of other cathartics, while the hyoscyamus prevents griping.

- No. 7.    ʒ Ext. Belladonna.... grs. 2  
           Ext. Glycyrrhiza..... qs.—M. ft. Pills No. 8.

Prof. Trousseau says when you wish merely to assist defecation, without purging, that “belladonna is the remedy *par excellence*.”

- No. 8.    ʒ Extract Belladonna... gr. i.  
           Pv. Rhei..... gr. 15  
           Pv. Ipecac..... gr. 5—M. ft. Pills No. 5.

These pills have long been known as Dr. Chapman's Peristaltic Persuaders. I have found them an excellent pill. They are frequently taken after eating a hearty dinner, by epicures. One is a dose.

- No. 9.    ʒ Ext. Nux Vomica,  
           Ext. Belladonna,..... ā ā grs. x.  
           Comp. Ext. Colocynth..... 3 ij.  
           Aloes. Socat..... ʒ i.

M. and make 40 pills.

These are mild in their action and more active than No. 8. One night and morning when the bowels are torpid.

- No. 10.   ʒ Strychnine..... gr. ss.  
           Ext. Colocyth Compos..... 3 ss.

M. ft. pills 36.

One to be taken, 3 times a day. They increase virmicular action.

- No. 11.   ℞ Mag. Sulphas..... ℥ 8.  
                   Elixir Vit..... f. ℥ i.  
                   Tr. Anrantii. .... f. ℥ 6.  
                   Atropine..... gr. i.  
                   Aqua Font..... ℥ 58.—M.

Dose, ℥ i. on going to bed.

When the bowels are sluggish, and the inner lining loaded with mucus, there is no superior remedy to this. It should not be continued too long at any one time, as it dissolves the mucous coating and acts as an irritant.

#### DIAERHOEA.

- No. 12.   ℞ Pv. Rhei.,  
                   Cal. Magnesia, ..... a 3 ss.  
                   Syrup Red Pepper..... ℥ iss.  
                   Sulph. Morphine..... grs. ii.  
                   Aqua Menthæ..... ℥ vi.  
                   Pv. Gum Arabic..... 3 iij.—Mix.

A desertspoonful 3 or 4 times a day. Shake the vial before using. This is pretty much the same as Waggamans' Mixt., and suited for billious diarrhœa, or when it is kept up by substances offending the stomach and bowels.

- No. 13.   ℞ Spts Turpentine..... 3 iss.  
                   Pv. G. Arabic..... ℥ ss.  
                   Carb. Magnesia..... ℥ ij.  
                   Tr. Opii..... ℥ i.  
                   Aqua Camphora..... ℥ vi.—Mix.

A tablespoonful 3 or 4 times daily: Diarrhœa supervening in typhoid fevers, with tympanitic distention, and hyperæsthesia of the mucous membrane of the large bowels. Turpentine and opium should never be omitted:

#### ANOTHER.

- No. 14.   ℞ Sub. Nit. Bismuth..... ℥ i.  
                   Tr. Catachu..... ℥ i.  
                   Tr. Opii. .... ℥ iss.  
                   Syrup Ginger..... ℥ v.—Mix.

Sig.—A tablespoonful pro re nater.

- No. 15.   ℞ Tr. Opii,  
           Spts. Camphor,  
           Tr. Capsicum,  
           Tr. Myrrh,..... ̄āā ̄i.  
           Tr. Catachu ..... ̄iij.—M.

A teaspoonful, according to the urgency of the case, in a wineglass of water. Used in chronic cases. It has been extensively used in the army. Dr. Dugas, of Augusta, is the author of it.

- No. 16.   ℞ Oxide Zinc..... 3 i.  
           Crumb of Bread..... qs.—M. ft. pills 20.

One to be given morning, noon and night. I, on one occasion, prescribed this preparation of zinc in a case of epilepsy, complicated with an intractable diarrhœa. The epileptic convulsions and diarrhœa were both cured, which I attributed to the arrestation of the bowel affection.

- No. 27.   ℞ Acid Tannic..... 3 v.  
           Glycerin..... ̄iiv.  
           Creosote .....gtts. xvi.  
           Ol. Sassafras .....gtts. v.—M.

A teaspoonful for an adult. In gastric and intestinal hemorrhage, resulting from hæpatic obstructions, where the dejections are black like tar, I have prescribed this formulæ repeatedly, with success.

#### ERYSIPELAS.

- No. 18.   ℞ Sulph. Magnesia..... ̄iij.  
           Aqua Font..... ̄viij.—Mix.

This is the best external remedy I have ever used. I commenced the use of it in the year 1845. It should be applied to the part three or four times a day, and suffered to dry on the skin, which leaves a white powder: this serves as a coating. Best to apply as warm as the patient can bear it, as the vitality of the part affected with erysipelas is always lowered. I am well aware that many contend that erysipelas



is a symptomatic disease, and not local, or idiopathic. Hence, it being unsettled, and still a subject "*sub lite*," it is not my province here to consider its ætiology. But one thing I will assert, that a saturated solution of Epsom salts applied *locally* to a part affected with this disease, has arrested it repeatedly, in my hands, without any constitutional medication. And yet, there is another circumstance connected with this disease which I do not understand; and that is, persons affected with it can tolerate four times as much of the muriated Tr. iron on the stomach, as in any other disease. I have frequently given from 40 to 50 drops every 3 or 4 hours, with impunity; and where this is the case, the patient generally recovers.

## DELIRIUM TREMENS.

No. 19.   ℞ Tr. Opii..... ʒ i.  
           Tart. Antimonii..... grs. ii.

A teaspoonful to be repeated every hour until sleep is induced. Dr. S. Henry Dickson, in a lecture delivered in the Medical College of the State of South Carolina, in order to impress the class with the importance of large doses of opium early in this disease, used the following quotation: "Throw the stone and the giant dies."

I have found exceptions to this rule. We frequently meet with cases where large and repeated doses fail to relieve the insomnia. In persons of this sort, if the remedy is pushed too far, fatal congestion of the brain will inevitably ensue. To prevent which, it will be found a safer treatment to combine tartar emetic with the opium.

No. 20.   ℞ Bromide Potassium..... grs. 640  
           Aqua Menthæ..... ʒ ij.  
           Aqua Font..... ʒ vi.—Mix.

A tablespoonful every two hours. I have used this prescription in two cases recently. In one case where the opium entirely failed, two doses of 40 grains each of the bromide

potassium put the patient to sleep, which continued uninterruptedly for nine consecutive hours. In the other, several doses were required, but in both the disease was rebuked.

No. 21.   ℞ Acetate Morphine.....grs. x.  
                   Aqua ..... ʒ ss.—Mix.

Twelve drops of the mixture to be injected under the skin, to be repeated as often as may be required. Medicines act much more promptly and efficiently when used hypodermically, than when taken into the stomach. The stomach of the debauchee frequently becomes so irritated that everything taken into it is immediately ejected. Where this is the case, medicine should be given hypodermically.

No. 22.   ℞ Pv. Squills.....grs. 60  
                   Pv. Gum Myrrh,  
                   Rubigo Ferri,.....ā ā 80  
                   Hydrarg. Chlorid Mite.....grs. 20

Mix ft. pills 30 or 40.

Dose from 5 to 8 daily. A good remedy in anemic condition of the system, with hepatic obstructions. Or in dropsies which are occasioned by defective absorption. These are passive dropsies, and the right side of the heart is always seriously involved. The pills are powerfully diuretic and alterative, and generally bring on pytalism. I have known the most extensive anasarca relieved in a few days by these pills. If pytalism ensues, continue the remedy, omitting the calomel. In giving the pills, I generally direct the patient to drink freely of a decoction of the Calcanthus Floridus, which is also a very powerful diuretic. Most cases of passive dropsy will yield to the above treatment in a short time.

#### NEURALGIA.

No. 23.   ℞ Hypophosphite Soda..... ʒ i.  
                   Aqua Ment hæ..... ʒ iv.—Mix.

A tablespoonful every three hours.

I was called, a few months since to see a professional brother, who was suffering from a severe attack of facial

neuralgia. The uppermost branch of the trifacial nerve appeared to be the seat of the disease. He complained of violent pain in the right eye shooting up into the side of the head. The eye was quite red, closed, and tears streaming from it, photophobia, etc. He said to me that he had "taken everything"—opium, warm applications, chloroform, large doses quinine, and had used leeches freely, and without any abatement of pain. I prescribed hypophosphite of soda, in drachm doses, as above. After three doses had been taken, the pain gradually subsided, and he fell into a quiet slumber, which lasted for several hours. When he awoke the pain was gone, and had no return of it. As is usual in such cases, the drug last given is held to have cured the disease. *Post hoc ergo, propter hoc.*

No. 24.     ℞ Tr. Aconite (Flemming's). ... ʒ ss.  
                     Tr. Opii,  
                     Turpentine Soap,  
                     Chloroform, ..... ā ā ʒ i.

M. ft. linament.

Or,

No. 25.     ℞ Tr. Aconite,  
                     Chloroform ..... ā ā ʒ i.—M.

These formulæ are applied frequently along the course of the nerve. And afford temporary relief in many instances.

No. 26.     ℞ Chinoidine..... 24 grs.  
                     ℞. Capsicum..... 5 "  
                     Strychnine..... 1 "

M. ft. pills 12.

Dose—a pill before each regular meal. After the above has been used sufficiently long to break down the paroxisms, the following may be substituted to complete the cure and restore the strength:

No. 27.     ℞ Quevennes Iron,  
                     Quinine, ..... ā ā 60 grs.  
                     Ext. Hyoscyamus..... 40 "  
                     ℞. Capsici..... 20 "

Mix and divide into 40 pills.

One pill to be taken after each meal. The above treatment was first recommended by Dr. Robinson, Charleston, So. Ca.

- No. 28.    B Ext. Conium,  
              Ext. Hyoscyamus,.....  $\bar{a} \bar{a}$  3 ss.  
              Sulph. Morphine..... grs. ii.

M. i Divide into 20 pills.

Sig.—One three times a day.

- No. 29.    B Cherry Laurel Water..... f.  $\frac{3}{4}$  iv.  
              Sulph. Ether.....  $\frac{3}{4}$  j.  
              Ext. Belladonna..... 3 ij.—Mix.

Rub on the neuralgic site frequently. Mostly used in traumatic cases, in conjunction with the pills, (No. 28.)

- No. 30.     $\frac{3}{4}$  Fluid Ext. Cannabis Indica.... 3 i.  
              Aqua Menthae..... 3 i.—Mix.

A teaspoonful three times a day. I have found it a good remedy where the pain is confined to the head.

- No. 31.    B Atropine..... grs. i.  
              Water..... 3 vi.—Mix.

- No. 32.    B Atropine..... grs. i.  
              Acetate Morphine..... grs. 10  
              Aqua Font..... 3 vi.—Mix.

- No. 33.    B Acetate Morphine ..... grs. ii.  
              Aqua Font..... 3 i.—M.

These recipes are to be used hypodermically. I generally inject 12 drops of either of the three. I prefer the external side of the arm, about two inches above the insertion of the deltoid muscle. When the pain is superficial the neuralgic site should be selected for the puncture.

#### SPERMATORRHEA.

- No. 34.    B Strychnine ..... grs. i.  
              Dilut. Nit. Acid.....  $\frac{3}{4}$  iv.—Mix.

A teaspoonful three times a day. It imparts tone to the seminal vessels, and relieves general debility. It should be given in small doses, to prevent its influence on the excitatory system.

- No. 35.     $\mathcal{R}$  Bromide Potassium.....  $\mathfrak{z}$  ij.  
                     Comp. Tr. Gentian,  
                     Aqua Eont,.....  $\bar{a} \bar{a}$   $\mathfrak{z}$  iv.

A desert spoonful three times a day. Spermatorrhœa is often the result of masturbation, and this practice is very often resorted to for the relief of excessive venereal desire (satyriasis). The bromides act as special sedatives upon the reproductive organs. I have been in the habit of giving bromide of ammonia, recently in Gonorrhœa, in conjunction with other appropriate treatment. Patients who take it are almost entirely exempt from cordie.

- No. 36.     $\mathcal{R}$  P $\nu$ . Digitalis.....grs. 20

Divide into twenty powders. One three times daily. Highly recommended by Dr. Laroche.

- No. 37.     $\mathcal{R}$  Tr. Ferri Muriat.,  
                     Tr. Secal. Cornut, .....  $\bar{a} \bar{a}$   $\mathfrak{z}$  i.—Mix.

Sig.—Thirty drops three times a day. I have found the above to act well in some cases.

- No. 38.     $\mathcal{R}$  P $\nu$ . Nucis Vomica.....  $\mathfrak{D}$  ij.  
                     Vallet's Proto-Carbonate Iron..  $\mathfrak{z}$  iij.  
                     Ext. Gentian.....  $\mathfrak{z}$  iss.

M. ft. pills No. 60. One three times daily.

- No. 39.     $\mathcal{R}$  Emplas Plumbi.....  $\mathfrak{z}$  ss.  
                     Strychnine.....  $\mathfrak{D}$  ss.  
                     Pices Bergund.....  $\mathfrak{z}$  ij.

M. ft. Plaster.

To be spread on sheepskin from three to five inches square, and applied to the lower part of the spine. I have used these remedies repeatedly, and with entire success.

## WHOOPING COUGH.

- No. 40.   ℞ Acid Prussic, U. S. D.....guttæ vi.  
           Ext. Belladonna.....gr. ii.  
           Tr. Opii Camphorata.....℥ iij.  
           Syrup Tolu.....℥ i.  
           Aqua Font.....℥ iij.—Mix.

A teaspoonful every three hours to a child two years old. After removing the complications, (if any,) the above is a favorite remedy with me. It acts well when the disease is somewhat advanced, and spasmodic.

- No. 41.   ℞ Bromide Ammonium.....℥ i.  
           Glycerine,  
           Syrup Tolu.....ā ā ℥ iij.—Mix.

Dose to infant from three to six months old, 10 to 20 drops four times a day; from four to six years, a teaspoonful; six to ten, from two to three teaspoonfuls. I consider this formula from the trial I have made of it, an invaluable remedy in whooping cough. I use it early in the disease. It keeps down inflammatory symptoms, and disposes to sleep. The cough is lessened in frequency and in violence. I am of opinion that the remedy abridges the disease at least one half. If expectoration is slight, I generally use the same quantity of Mel. Scillæ Comp., in place of the syrup tolu.

## SELECTIONS.

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*Popliteal Aneurism: Cure by Flexion.* By P. SIDNEY  
JONES, M. D. London.

H. W., aged 31, a gentleman following pastoral pursuits, called upon me, on November 17, 1865, complaining of rheumatic pains in the right knee which had troubled him for several months. During the last few days the pain had become much worse, especially at night after walking a good deal. Is accustomed to take violent horse exercise, and a few months since, in jumping from a vehicle in motion, wrenched his right leg. Upon examination of his limb I discovered a pulsating swelling about the size of a small orange, occupying the popliteal space. The pulsation was expansile and tearing, synchronous with the pulse at the wrist, and completely arrested by pressure upon the femoral artery in the groin. The tumor could be nearly emptied by pressure, and felt to fill again when the pressure was removed. The skin over the tumor was quite healthy, and not adherent. The fingers could be passed down between the tumor and the muscles bounding the popliteal space, so as to grasp it. No bruit was perceptible.

Mr. Nathan, one of my colleagues at the Infirmary, saw the patient with me on the 19th, and confirmed the diagnosis. As the pulsation in the aneurism was completely checked by acute flexion of the knee, I determined to employ Ernest Hart's method, and accordingly on the 21st, carefully bandaged the limb from the toes to the groin, and bent the knee, so that the heel was about eight inches from the buttock, retaining it in this position was a figure of 8 bandage. In two days the heel was brought to within three inches of the buttock; but as this degree of flexion could not be borne for many hours, notwithstanding the use of morphia, he was allowed occasionally to extend the limb, and it was always relaxed somewhat at night.

On the fifth day I suspended over the thigh, by means of a small cord, a conical bag filled with 9 lbs. weight of small shot. Whenever the pain from the flexion became unbearable, the patient extended his leg and placed the conical end of the bag over the artery in Scarpa's triangle. This completely controlled the circulation as long as the bag was kept

directly over the artery; but finding the patient could not manage this himself, and not having any competent assistant, it was desisted from after two days' trial. This plan appears to me, to have an advantage over digital compression, in that it is much less fatiguing to hold a bag steadily than to compress a vessel with the fingers, and hence fewer assistants will be needed.

On the nineteenth day (December 11) from the commencement of the flexion treatment, there was considerably less pulsation in the tumor; and over the front of the knee, which was a good deal swollen, and on each side of the patella small vessels could be felt pulsating.

On the twenty-seventh day (December 19) the pulsation had greatly diminished, and on the twenty-ninth day it ceased entirely. Nothing could be felt but a slight rippling over the centre of the tumor.

On the thirty-first day he was allowed to come down stairs.

On December 27 (thirty-fifth day) my notes are: "Tumor quite solid and free from pulsation; limps a good deal; still has some pain in the ham."

I saw no more of this gentleman until a month later (January 22, 1866), when he called upon me, complaining of severe pain in the left ham, which had begun to trouble him about ten days before. On the evening before calling on me, after walking about two miles, the pain was very severe, accompanied with violent throbbing. Upon examination I discovered a pulsating swelling, about the size of a walnut, situated in the course of the popliteal as it lies under the gastrocnemius muscle. It had all the characters of an aneurism, and a loud bruit could be heard over it. Circumstances prevented the patient from submitting himself to treatment until February 5, when the tumor was in much the same state. I bandaged and flexed the limb as with the other leg, and though flexion did not control the circulation in the aneurism so completely as in the first case, yet on the fourteenth day all pulsation had ceased in the tumor. A month later I saw this patient again. He was then quite well, though complaining of weakness in the right leg. Both aneurisms were then quite solid, and that in the right ham had very much diminished in size.

While under treatment for these aneurisms, this patient took morphia—sometimes as much as three grains in the day; and the knee, in which he at first complained of much



pain, was rubbed with landanum and oil. Towards the middle of the period of treatment he complained of severe pain in the shin-bone.—*Medical Times and Gazette*, Sept. 8, 1866.

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*A New Caustic.* By P. W. ELLSWORTH, M. D., of Hartford, Connecticut.

Will you permit me to call the attention of the profession to a new medical agent, or at least a new application of an agent in pretty general use, but whose properties are not yet fully understood, viz., sun-light.

It has been a great desideratum in the profession to devise some method of removing nævi, marks, discolorations, moles and other diseased conditions of the skin, whether natural or acquired, without subjecting the patient to the knife, or leaving a cicatrix quite as repulsive as the original disease. A Mr. Augustus Barnes, a true Yankee, but not a member of our profession, thinks he has hit upon such an agent—first experimenting upon himself upon a mole; and I am much inclined to believe he has made a valuable discovery.

He uses a lens of two and three inch diameter, condensing the rays upon the object to be removed, and going over the whole, if not more than three in surface, at one sitting. Mr. Barnes, who is a very pleasant, agreeable gentleman, called on me a few weeks ago, and introduced the subject. At first it did not strike my fancy, as I supposed the pain would be equally severe with other caustics, and the effects no way superior. However, I witnessed his operation with fairness, and with interest, and am disposed to give him considerable credit, and believe his discovery in scientific hands will be made more generally useful than even the inventor believes. I have seen one gentleman, who had a nævus on his face, extending from the eye to below the mouth, and involving the lower eyelid to the very edge, and covering four or five square inches of surface; it was of a deep cherry-red color, approaching purple, and covered with knobs of condensed tissue, an eighth of an inch high. This nævus could be seen

as far off as the color of the face. After two applications the spot has nearly disappeared, the skin generally having the hue of a surface blistered some days previously, and it is now nearly well. Some portions were absolutely like normal skin, and entirely colorless. Every knob was gone, and where stood one of the largest, and where the rays were longest condensed, was a perfectly healthy-looking cutis. I do not consider this man as absolutely well, but so much better than he would have been under any known agent, that I must confess my hopes have been considerably raised. As a deformity, or rather as a mark, this man can be considered practically cured, although there is at present the appearance stated, but which does not especially draw attention. I would add, that the rays were condensed with excellent success, even on the very edge of the lid. Mr. Barnes applied his caustic not only to discolorations, but to small tumors involving the surface of the skin, to lupus and ulcerations. He claims to have produced a true and healthy skin of the surface affected by ichthyosis.

How the light, as a caustic, operates differently from other agents, it may be difficult to say, but it has struck me that as the rays are possessed of powerful bleaching properties, it is possible this principle may be brought into play. If the pigment is destroyed, and the secreting power of the corpus mucosum changed, there may be an alteration in the color, without impairment of the cutis vera, which latter seems in all cases to have remained uninjured.

Nor is the pain as severe as we might apprehend, as it is confined at each instant to a very minute point, and therefore must be less perceptible than when diffused over a large surface. Patients at any rate submit very readily and without the use of anæsthetics. I would here suggest, that probably we may not find in this remedy for the lead-colored skin produced by light acting on nitrate of silver. It would be less likely to cure than when the discoloration was from some other cause, since it is the effect of light. There is this difference, moreover, that in the nitrate of silver stain the whole skin may be impregnated, while in nævi the discoloration is confined to some particular tissue or layer. I strongly suspect the skin of the negro might be changed to some degree more probably than in case of coloring with nit. silver.

As to the removal of lupus and small cancers, we may well entertain grave doubts. But as there is no proof that cancer in its incipency is not a local disease, it would be

wrong to pronounce too hasty judgment. I intend making further experiments with this agent, and hope others of the profession will do the same, and give the results to the public. I regret that Mr. Barnes talks of getting a patent, but he is a non-medical man, he thinks his idea, if valuable, should be paid for in some way. He can hardly be compensated in that matter; but if the discovery is as useful as there is reason to hope, he deserves the thanks of the profession.—*Phil. Med. and Surg. Reporter.*

## EDITORIAL AND MISCELLANEOUS.

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### END OF VOLUME SEVEN.

With this number, the seventh volume of the *Atlanta Journal of Medicine and Surgery* will be complete. Such as may desire to have the volume bound, will find an ample index, and we take pleasure in informing them that there are facilities in this city for having the work substantially and cheaply done.

This Journal suspended during the war, and by the war: was revived in March last, under circumstances of the greatest embarrassment, without one dollar to pay expenses; without one single exchange or a single subscriber; the material prospects of the country blasted, and individual fortunes swept away. Still unappalled by this array of obstacles, we launched our enterprise upon the sea of fortune, amidst the breakers and adverse winds and currents, but by the blessing of Providence and the kindness of our friends, we have completed another volume.

If the Journal has not been everything our friends expected, or we ourselves could have wished, the explanation is easy. We had no exchanges; no contributors; no money. We were obliged to work at our profession, day and night, and give all our earnings to pay expenses. The attention due to it was necessarily monopolized by other necessities and demands upon us. We have done, not only without comforts, but necessities even, that the Journal might live and go forth monthly to our brethren. They have had our best endeavors. We hope they are pleased. With the past we are satisfied, because we could do no more. In the future we see much to encourage us, and we do not hesitate to say that with a complete exchange list, and many valuable contributors, we can make the *Atlanta Journal of Medicine and Surgery* equal to any in the country.

We thank our brethren of the press for their uniform courtesy—our contributors for many able articles—our patrons for their forbearance and punctuality, and our Heavenly Father for his beneficent favor.

The first No. of volume Eight will be issued early in March. We ask our friends to interest themselves for us. Our burden is heavy: they can take much of it from our shoulders. Such as are in arrears will please remit at our risk. Many, like ourselves, have been stripped by the war, and cannot, conveniently, pay in advance. To such we say, send for the Journal and pay when you can make collections.

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#### OUR JOURNAL AS AN ADVERTISING MEDIUM.

We take this method of informing the public that our circulation in Georgia, and, indeed, in all of the Southern States, is perhaps equal to that of any other Southern journal, and we respectfully solicit a share of the patronage appropriate to such a medium.

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*A Practical Treatise on the Physical Exploration of the Chest, and the Diagnosis of Diseases affecting the Respiratory Organs.* By AUSTIN FLINT, M. D., Professor of the Principles and Practice of Medicine in the Bellevue Hospital Medical College, and in the Long Island Hospital: Fellow of the New York Academy of Medicine, etc. Second edition, revised. Philadelphia: Henry C. Lea, 1866.

Of all the Physicians in America, with whom we have any acquaintance, (and we only know him by his writings)

Dr. Flint is the man after our own heart, whom we would select as a model for the accomplished physician. Not that he is possessed of the brilliancy of genius that dazzles the world by the splendor of its eloquence; not that he rules the minds of his contemporaries like Rush, or Chapman, or Dewes; not that he is looked up to as the great intellectual luminary of his age, for the theories and opinions that shall rule the minds of medical men of his own time and for centuries to come. It is not for these nor for many other reasons we might mention that we admire Dr. Flint: the time for the worship of such attributes in the medical man has passed. The medical mind of the present day needs no master. The genius of medicine in our time has emancipated itself from the dictation of authority, and launches forth in the noon-day sun of scientific observation for its lessons of truth and wisdom.

Let us not be misunderstood. We have no desire to derogate from the God-given attributes of genius. The mastery of mind has been acknowledged in all ages, and will continue to control the minds of men for all time to come. What we maintain is this: that it is not the transcendent intellect, with its brilliant theories, its eloquent rhetoric, and specious argument, that leads in the science and art of medicine at the present day. Hippocrates and Galen, Sydenham and Cullen, Gregory and Rush, were good enough in their time—their age and generation deserve well of them—their towering minds illumined the darkness by which they were surrounded. Galen, alone, exercised undisputed authority in medicine for more than a thousand years. Our profession has entered upon a new epoch: it has cast off the swaddling clothes of subserviency to any one or dozen minds; and we conceive it impossible that any one mind, however much endowed, can exert any degree of supremacy in the science and art of medicine as now cultivated.

The laborious chemist in his laboratory; the patient observer at the microscope; the zealous cultivator of experimental physiology; the indefatigable pathologist in the

Dead House; the careful observer and recorder of facts at the bed-side: these are the authorities that now rule in medicine, and not the brilliant theorist nor bold speculator.

It is as the type of the true and progressive medical philosopher that we desire to present Professor Flint to our readers. In the invaluable work before us, we have a book of *facts* of nearly 800 pages, admirably arranged, clear, thorough, and lucid on all points, without prolixity; exhausting every point and topic touched; a monument of patient and long continued observation, which does credit to its author, and reflects honor on American medicine. We had supposed that the science of auscultation and percussion had reached perfection: indeed, that like Minerva, from the brain of Jupiter, Laennec had presented it to the medical world fully panoplied, in all its parts, without passing through the different stages of development incident to other sciences. But in this it seems we were mistaken.

Physical exploration of the chest, like other departments of medicine, is progressive, and has not escaped the vigilant and searching spirit of enquiry that now animates the profession. Our author invites attention to his study of the "intensity, pitch, and quality of sounds," as tending to increase the scope of physical exploration, and adduces examples of nice discrimination that may be made in this way. We have also some new names added to the vocabulary of the science: e. g. *vesicule-tympanitic resonance*, an exaggerated resonance sometimes found in the healthy chest; *broncho-vesicular*, or *vesiculo-tubular* respiration, *broncho-cavernous* respiration. Again: *exaggerated bronchial whisper*, *whispering bronchophony*, or *bronchophonic whisper*, and *cavernous whisper*. These are new names, which the accomplished author assures us express signs not before recognized; and we are also informed of a novel mode of auscultatory percussion, which consists in applying Camman's stethoscope near the open mouth of the patient, while percussion is made. In this way the amphoric and cracked-pot sound

may often be obtained in cases in which they are not otherwise appreciable.

Finally, Prof. Flint favors us with an outline of his system of teaching auscultation and percussion to private classes at the bed side, and, in our opinion, there are few in any country more competent to give such instruction. And, from personal experience, we are satisfied that this clinical (bed-side) mode is the *only* successful one of imparting knowledge upon this important and interesting subject. Teaching it *ex-cathedra*, is simply time thrown away, and disgraces the student with a subject he cannot understand.

To a man reasonably familiar with physical exploration, practically, the work before us is a mine of wealth. A certain amount of this kind of knowledge is necessary to its proper appreciation. Like everything from the pen of the gifted author, the subject of this work is treated to exhaustion: nothing is left to be added, and no other source of information need be consulted upon any point treated.

D. C. O'K.

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*A Treatise on the Principles and Practice of Medicine; designed for the use of Practitioners and Students of Medicine.* By **AUSTIN FLINT**, M. D., Professor of the Principles and Practice of Medicine, in the Bellevue Hospital Medical College, and in the Long Island College Hospital; Fellow, of the New York Academy of Medicine, &c. Second edition, revised and enlarged. Philadelphia: Henry C. Lea, 1867.

With the above title, the profession is presented with a work of 960 pages, and had the author consulted the number of volumes already published on the Practice of Medicine, he doubtless would have concluded that an additional



volume upon the same subject would have been work of supererogation. If there be those who believe that a new work upon the Principles and Practice of Medicine, as now understood and practiced by the most intelligent members of the profession, is uncalled for, we are not of that number. On the contrary, we believe that it is *imperatively* demanded, and thank the author that he has so ably performed the labor. Where, for example, can the medical student or young practitioner find reflected the views that now so generally obtain among enlightened physicians on the pathology and treatment of disease? Not in Wood or Watson, MacIntosh or Good, Dungleson, Dickson, or Bell and Stokes; much that he learns from these authors he is compelled by painful, practical experience, to unlearn. The truth is, that the works on the theory and practice of medicine, written before the last fifteen or twenty years, are not only useless in many respects as guides for the present, but positively injurious. Take, for example, Wood's treatment of typhoid fever. "After direct depletion," says he, by which he means the previous use of purgatives and blood-letting, "nothing is so efficient in arresting this process (disorganizing inflammation) as mercury." And Watson, whose lectures are an ornament to the English language, whilst he speaks of venesection with doubt and hesitation, still advises the use of mercury in this disease. Just on this point a little personal experience may be allowed. The writer obtained his medical education in a locality at the South where malarial disease constituted the endemic of the country. A large proportion of the course of lectures on the practice of medicine was devoted to this subject, and the class left the institution with a good knowledge of the nature and treatment of Intermittent and Remittent Fever, the various forms of congestive and malignant malarial fevers, &c. Many of the graduates of that college practiced their profession in sections of country where malarial diseases scarcely ever existed, and they felt that the time given to the subject was unprofitably spent. Instead of the

well developed, sthenic forms of malarial disease with which they became accustomed during their collegiate course, they encountered the low, asthenic and insidious forms of disease *now* well recognized under the names of typhoid fever, typhoid pneumonia, typhoid dysentery, &c.

The writer distinctly remembers the feelings of chagrin and disappointment developed under these circumstances. He was called upon to treat forms of diseases of which he had no knowledge whatever, which, because of their novelty and fatality, excited great alarm in the public mind. At this time, say twenty years ago, there was not a systematic work on the practice of medicine that could be consulted with profit upon these subjects: and with a few exceptions, the same remark may be made at the present day with regard to systematic works. The profession of the present day, it is true, thoroughly comprehend the nature and management of this class of diseases; but they owe no obligation to books for their knowledge. Their own experience, as promulgated through the medical periodicals of the country, together with the teachings of the schools, has done the work. But we have wandered from Prof. Flint and his excellent book, and we must ask the reader's pardon. We have not read this second edition of Flint's practice, nor do we expect to do so at present; not like Sidney Smith, least we might become prejudiced for or against the work by an examination of it, but because we are already familiar with the great principles of pathology and practice which he advocates.

Flint is certainly the first American author that has embodied in a systematic work on the practice of medicine, the views that have governed the profession in this country for many years. This is a singular fact in the history of our profession, viz: that a certain view of pathology and practice becomes almost universally adopted before we find it acknowledged in books. The same is true of legislation; the laws of a community never keep pace with its public opinion. Take, for example, the usury laws of any of our

States. Every intelligent citizen will admit that money is property, and like any other species of property, ought to control its market value without legislative restriction; and yet none of our legislatures can embody that public opinion into a law. The same is true of the study of practical anatomy. Every man will acknowledge that anatomy should be studied by physicians, and yet our statute books are disgraced by penal enactments prohibiting it.

The work before us, then, is a fair and intelligent exponent of the practice of medicine of the present day, and the change which it inaugurates is so great as to constitute an epoch in our profession. For our own part, except as objects of historical interest, we have no use for old works on the practice of medicine. They contain teachings on pathology and practice now very generally discarded and tend to perpetuate in the profession opinions which must, sooner or later, be abandoned. For this reason we have often indulged the radical thought that their entire destruction would be a gain to the profession.

Perhaps we should explain our views on this point. We have great respect for antiquity, and love to study the works of her great minds as matters of curious professional interest; indeed, we entertain a sincere admiration for the great father of medicine himself, who, from the rubbish and chaotic material of his time, constructed the comely and systematic structure which he has transmitted to us. But, as already intimated, a new era has dawned upon medicine; young physic in her swaddling clothes, as Dr. Forbes called her twenty years ago, is now assuming the garb of modest but mature maidenhood, and ere long, nay, even in our own time, will reign supreme in her peculiar domain. The great change spoken of is in the treatment of many acute diseases. Instead of acute disease being regarded as a fire to be extinguished, or a wild beast to be strangled, as was formerly the case, its natural history is now carefully studied; its tendency to spontaneous cure, its mode of termination, the mode of death in, its course uninfluenced by remedies, the

comparative results of different systems of treatment—all these and all other influences that could modify or change the result are carefully noted.

A few extracts from the author's treatment of acute pleurisy illustrate his views of the treatment of acute inflammation in general, and serve as an example of the great change in medical practice.

"A great change has taken place," says our author, "within the last few years, with respect to blood-letting in the treatment of acute inflammations. This measure was formerly thought to be highly important, and was rarely omitted. It is now considered by many as seldom if ever called for. The infrequent use of the lancet now, contrasted with its frequent use twenty-five years ago, constitutes one of the most striking of the changes in the practice of medicine which have occurred during this period. It can hardly be doubted that this measure was formerly adopted too indiscriminately, and often employed too largely; but, with the natural tendency to pass from one extreme to another, it may be that the utility of blood-letting in certain cases, at the present time, is not sufficiently appreciated. Experience and pathological reasoning combine to show that blood-letting does not exert a direct controlling effect upon an inflammatory disease. It may exert a powerful immediate effect as a palliative measure, and whatever curative power it may possess is exerted indirectly. Its therapeutic action consists in lessening the frequency and force of the heart's action; in other words, in diminishing the intensity of symptomatic fever.

"In the early period of an acute inflammation, accompanied by high febrile movement, as indicated by a pulse accelerated and of abnormal strength, the abstraction of blood affords relief, and may contribute to a favorable progress of the disease. It should enter into the treatment of a certain proportion of cases, provided other and more conservative means for the same ends are not available. The evil of blood-letting arises from its spoliative effect upon the

blood. It diminishes the red corpuscles, and these, during the progress of acute disease, are not readily reproduced. It induces, thus, the anæmic condition, and in this way impairs the vital powers. It will be likely to do harm, therefore, whenever it is important to economize the powers of life, and it may contribute to a fatal result in diseases, or cases of disease, which involve danger of death by asthenia."

Again, continues Dr. Flint: "The evils of indiscriminate and excessive blood-letting are manifested by a larger rate of mortality in those diseases which tend to destroy life by asthenia, and it can hardly be doubted that the death-rate has been diminished by a much more sparing use of the lancet within late years. But the results of injudicious blood-letting are manifested in cases which end in recovery, as well as in those which end fatally. These results consist in a protracted convalescence and subsequent feebleness. The cases of different inflammations treated formerly by blood-letting and other measures, entering into the so-called antiphlogistic method, and the cases now treated otherwise, present a striking contrast as regards the condition of patients during convalescence and after recovery. The opinion is held by some that diseases and the human constitution have undergone a notable change during the last quarter of a century, and that blood-letting and other antiphlogistic measures are less appropriate now than formerly on this account. This opinion seems to me not well founded. After a professional experience extending beyond the period just named, I do not hesitate to express a conviction that acute inflammations at the present day are essentially the same that they were twenty-five years ago, and that antiphlogistic measures were no more appropriate then than now."

These views on the treatment of acute inflammations have been held by many intelligent members of the profession for many years; and yet the work before us, so far as we know, is the first systematic American work that embodies them. We say American, for the well known reason that

Prof. Bennett, of Edinburg, published a work five or six years ago, in which he advocates the same, or indeed more radical views of the treatment of acute inflammation. It would be interesting to trace the philosophy of this change but our limits will not permit.

Finally, in a comparatively small compass, the whole field of the principles and practice of medicine is explored by our author in a clear, well arranged, succinct and masterly manner. The work is, therefore, peculiarly adapted to the busy practitioner and should be in the hands of every medical man who desires to comprehend the present status of his profession. As a text book for students in our medical schools, we regard it as the only book on the subject of which it treats proper to be placed in their hands.

D. C. O'K.

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### BIBLIOGRAPHICAL.

*A Manual of Medical Jurisprudence.* By ALFRED SWAYNE TAYLOR, M. D., F. R. S. Fellow of the Royal College of Physicians, and Professor of Medical Jurisprudence and Chemistry in Guy's Hospital, Sixth American, from the eighth and revised London edition, with notes and references to American Decisions. By CLEMENT B. PENBOW, of the Philadelphia Bar.

This work should be in the hands of every physician. Too little attention has been paid to the medico-legal questions so often occurring in courts and elsewhere; and it is painful to witness the ignorance of many medical gentlemen on the subject, who are otherwise well informed. It holds an important place in polite literature, and no man can be considered accomplished without a knowledge of it.

*An Introduction to Practical Chemistry, including Analyses.*

By JOHN E. BOWMAN, F. C. S., late Professor of Practical Chemistry in King's College, London. Edited by CHARLES BLOXAM, F. C. S., Professor of Practical Chemistry in King's College, London, &c., with one thousand and seven illustrations. Fourth American, from the fifth London edition revised.

We have heard this work well spoken of.

*Chemical Observations on Functional Nervous Disorders.*

By C. HANFIELD JONES, M. B. Cantab; London: F. R. S., Physician to St. Marys' Hospital.

This is an able work. We commend it to the profession.

*A Handy Book on Ophthalmic Surgery, for the use of Practitioners.*

By JOHN Z. LAWRENCE, F. R. C. S., M. B. University of London, Surgeon to the Ophthalmic Hospital, Southwark; Editor of the Ophthalmic Review, &c.; and ROBERT C. MOON, House Surgeon to the Ophthalmic Hospital, Southwark, with numerous illustrations.

This is a valuable book, and should be in the hands of every practitioner.

*A Practical Treatise on Diseases of the Skin.*

By J. MOORE NELLIGAN, M. D., M. R. J. A., &c. Fifth American from the second revised and enlarged Dublin edition, by T. W. BELCHER, M. A., M. D., Dublin, &c.

This work has been long approved by the profession, and is often referred to as one of the very best authorities of the skin. We think there is a want of appreciation of the importance of this subject by the profession at large. We plead guilty ourself. Every pimple has its importance in a pathological point of view. And whilst no symptoms can be set down as meaning less, they often point too, and are significant of the greatest trouble.

## THE INTERNATIONAL MEDICAL CONGRESS.

We have just received the programme adopted by the committee appointed to organize the plan of procedure for the proposed International Medical Congress, to be holden at Paris, in 1867, in connection with the Exhibition, and to which we called the attention of our readers in the issue of the Journal for August. For the information of those who desire to take part in the proceedings, we translate such portions as give the prominent points.

The Congress will be opened on the 16th of August, 1867, under the auspices of the Minister of Public Instruction, and will continue in session two weeks.

It shall be composed of national members or founders, and associate foreign members. The national members will be required to pay each twenty francs, but the associate members are relieved from all pecuniary contribution.

The members of the Congress, national and associate, shall alone take part in the discussions, and the committee have proposed as subjects of discussion the following

I. The anatomy and pathological physiology of tubercle: tuberculization in different countries, and its influence on the general mortality.

II. The common accidents which lead to a fatal result after surgical operations.

III. Is it possible to propose to the different governments any effective measures for restraining the propagation of venereal diseases?

IV. The influence of alimentation employed in the different countries on the production of certain diseases.

V. The influence of climates, races, and different conditions of life in different countries upon menstruation.

VI. The acclimatization of European races in hot countries.

VII. On the entozoa and entophytes which can be developed in man.

Members wishing to make any communication upon the questions of the programme, or to propose any other subject, must send their essays to the General Secretary, at least three weeks before the time of meeting. The committee will decide upon the fitness of the communications, and the order in which they shall be received. Each question



will occupy but a single sitting, and a maximum of twenty minutes only will be allowed for reading each essay.

Accompanying this programme is a commentary on the questions proposed, indicating the points that are especially desired to be brought out in the discussion, and given with the view of securing precision, with the necessary brevity, in the essays. We have no space for it at present, but will endeavor in our subsequent issue to present some of the more important part of the same.—*N.Y. Medical Journal*.

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**HOOPING COUGH.**—For the past ten years we have used with decided benefit the following prescription suggested by Dr. Alnat, more than a quarter of a century ago :

“Take of carbonate of potassa, a drachm ; chochineal, a scruple ; boiling water, eight ounces. The dose is a teaspoonful three times a day.”

Dr. Alnat contends that there is a “peculiar “acid” generated in the system by this disorder, which is the exciting cause of the spasmotic action of the glottis producing the “whoop,” and that to obtain the full effect of the anti-spasmodic and anodyne properties of the cochineal an alkaline solution is essential.

Whether Dr. Alnat’s peculiar views are correct in regard to the cause of the most distressing feature of whooping cough we will not discuss ; but will state that in quite the majority of cases in which we have prescribed the above remedy, we have had a decided modification of the distressing symptoms.

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**White Pine Wood Bullet Probe.**—Dr. V. Gelisch, of Los Angeles, Cal., recommends (*Pacific Med. and Surg. Journal*, Oct. 1866) a piece of white pine cut into the shape of a probe as a ready means of detecting a leaden ball in a wound. He says if such a probe be inserted into a wound and rubbed against the suspected object, and then quickly withdrawn, if the object be a leaden ball, traces of the lead will be plainly perceptible on the end of the probe. This will be useful where a Nelaton’s probe is not at hand.

*Meteorological Observations taken by J. G. Westmoreland, M. D., Jan. 1887, at Atlanta, Ga. Lat. 33°45'—Lon. 7°80'—Heights above the Sea, 1080 feet. EXPLANATION OF TABLE.—0 Signifies Fair; 10 Cloudy; 5 Half Cloudy.*

Day of Month	BAROMETER.		THERMOMETER.			RAIN AND SNOW.	CLOUDS.			WINDS.		
	6 A. M.	12 M.	6 P. M.	6 A. M.	12 M.	6 P. M.	6 A. M.	12 M.	6 P. M.	6 A. M.	12 M.	6 P. M.
1	30.08	30.08	30.74	36	38	40	10	10	5	E.	E.	E.
2	30.00	30.00	30.3	36	40	38	5	0	0	N.	N.	N.
3	30.03	30.03	30.5	40	39	40	10	0	0	E.	E.	E.
4	30.03	30.03	30.3	34	36	44	0	0	0	E.	E.	E.
5	30.03	30.03	30.3	39	44	43	0	0	0	W.	W.	W.
6	30.03	30.03	30.3	31	44	43	0	0	0	N.	N.	N.
7	30.07	30.03	30.3	36	43	40	5	5	10	W.	W.	W.
8	30.00	30.06	30.6	36	50	47	5	0	0	N.	N.	N.
9	30.3	30.06	30.5	33	50	45	5	0	0	W.	W.	W.
10	30.04	30.06	30.4	33	38	37	5	0	0	E.	E.	E.
11	30.00	30.06	30.6	34	40	45	5	10	5	N.	N.	N.
12	30.04	30.6	30.7	34	46	48	5	10	10	E.	E.	E.
13	30.08	30.08	30.7	35	48	53	10	10	10	E.	E.	E.
14	30.07	30.07	30.7	35	66	67	10	10	10	W.	W.	W.
15	30.07	30.07	30.7	33	45	36	5	0	0	E.	E.	E.
16	30.7	30.8	30.8	33	46	49	5	0	0	N.	N.	N.
17	30.06	30.08	30.8	36	40	33	0	0	0	W.	W.	W.
18	30.06	30.08	30.8	36	40	33	0	0	0	N.	N.	N.
19	30.7	30.7	30.8	36	41	39	0	5	10	E.	E.	E.
20	30.3	30.04	30.3	30	42	34	10	10	10	W.	W.	W.
21	30.3	30.3	30.4	34	34	34	10	10	5	E.	E.	E.
22	30.08	30.08	30.4	39	38	43	0	0	0	N.	N.	N.
23	30.08	30.04	30.4	36	43	40	10	10	5	W.	W.	W.
24	30.04	30.4	30.5	46	54	53	10	5	5	N.	N.	N.
25	30.4	30.4	30.3	40	53	56	10	10	5	E.	E.	E.
26	30.4	30.4	30.3	49	53	56	10	10	10	W.	W.	W.
27	30.4	30.4	30.3	34	34	33	10	10	10	N.	N.	N.
28	30.07	30.06	30.6	36	30	35	0	0	0	W.	W.	W.
29	30.07	30.06	30.6	36	40	40	0	0	0	N.	N.	N.
30	30.06	30.6	30.6	33	37	47	10	10	10	W.	W.	W.
31	30.07	30.06	30.6	44	54	55	5	0	0	E.	E.	E.

*Pruritus Pudendi successfully treated by Sulphite of Soda.*  
By Samuel B. Frizell, M. D., of Grangerbury, Ohio.

In September, 1866, I was consulted by a lady suffering from pruritis pudendi following menstruation—accompanied with great irritation and much pain.

Having read of the influence of sulphite of soda on syco-sis menti, the idea suggested itself to me of trying the same in this case. I accordingly prescribed for her the following local application: Sodæ sulphis 3j, aquæ 3 iij, glycerinæ 3j, M., which was to be used quite often. In three days no trace of the disease was apparent.—*American Journal of Med. Science.*

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